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March 6, 2012

Ms. Susan Lessard, Chair
c/o Ms. Terry Dawson
Board of Environmental Protection
Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017

Re: Town of Oakfield's Response to Appeals of Protect our Lakes and Donna Davidge

Dear Ms. Lessard:

Enclosed please find the Town of Oakfield's Response to Appeals of Protect our Lakes and Donna Davidge for the Board of Environmental Protection's review and consideration.

Please feel free to contact me should you have any questions.

Very truly yours,

P. Andrew Hamilton

Enclosures

Cc: Jessica Damon, MDEP
Dale Morris, Town Manager
Juliet Browne, Esq.
Lynne Williams, Esq.

STATE OF MAINE
BOARD OF ENVIRONMENTAL PROTECTION

IN RE:

EVERGREEN WIND POWER II AND	)	
MAINE GENLEAD LLC	)	
OAKFIELD, CHESTER, WOODVILLE	)	
MATTAWAMKEAG, MOLUNKUS	)	
TOWNSHIP, MACWAHOC PLANTATION	)	**TOWN OF OAKFIELD'S**
NORTH YARMOUTH ACADEMY GRANT	)	**RESPONSE TO APPEALS OF**
REED PLANTATION, GLENWOOD	)	**PROTECT OUR LAKES AND**
PLANTATION, T3R3 WELS, T4R3 WELS	)	**DONNA DAVIDGE**
AND LINNEUS, AROOSTOOK AND	)	
PENOBSCOT COUNTIES	)	
WIND POWER AND GENERATION	)	
LEAD LINE	)	
L-24572-24-C-N (approval)	)	
L-24572-TF-D-N (approval)	)	
L-24572-IW-E-N (approval)	)	
L-24572-24-F-N (approval)	)	
L-24572-TF-G-N (approval)	)	

The Town of Oakfield, as a host community and participant in this proceeding, hereby responds to the appeals by Protect our Lakes and Donna Davidge [the "Petitioners"] as follows.

I. INTRODUCTION

In 2009, the Department approved a 34-wind turbine wind energy facility proposed by Evergreen Wind Power II, LLC ["Evergreen"] in the Town of Oakfield, Maine [the "Oakfield Wind Project" or "Original Project"]. The Town of Oakfield, through action of its Board of Selectmen, established a Wind Energy Review Committee ("WERC") that conducted an independent but coordinated review (with acoustical and civil engineers) above and beyond the review of the Maine Department of Environmental Protection. As detailed below, the Town Meeting of Oakfield approved the 46-page report of the Oakfield WERC as to the Original Project. The Original Wind Project was subsequently appealed to the Board of Environmental

Protection as well as to the Maine Supreme Judicial Court, and both BEP and the Law Court affirmed the Department's Approval Order.

In 2011, Evergreen submitted an amendment application to the Department for a 50-wind turbine project [the "Amended Oakfield Wind Project" or "Amended Project"], and Maine GenLead, LLC submitted an associated application for a transmission line from Oakfield to Chester to transmit power from the Amended Oakfield Wind Project [the "Transmission Line Project"]. Again, through due and timely action of the Oakfield Board of Selectmen, the Oakfield Wind Energy Review Committee was reconstituted in 2011 and conducted a meticulous review of the larger Amended Project. The Committee again conducted a series of public meetings open to residents of Oakfield and other members of the public, during which specific elements of the Application for the Amended Project were addressed with support from its acoustical and civil engineers and counsel. At the conclusion of its review, the Committee issued a 38-page Final Report addressing specific impacts of the Amended Project and advancing recommendations addressing those specific impacts to the Town and the Applicant for changes to the Amended Project and the manner in which the impacts of the Amended Project were to be addressed.

The Applicant accepted the recommendations of the Oakfield WERC and submitted a letter amending its application for the Amended Project, the result of a cooperative approach between First Wind and the Town in both the 2009 and 2011 proceedings. The Applicant has been very responsive to local concerns including (1) work with the local snowmobile group to relocate snowmobile trails affected by the project and (2) acceptance of a noise complaint response protocol developed by the Town's acoustical engineer and the WERC as part of the

initial review process in response to local concerns. That complaint response protocol is now a model for and, in fact, required under the new sound rules for all projects.

On January 17, 2012, the Department approved the Amended Oakfield Wind Project and associated Transmission Line Project in an Order that incorporated the amendments to the application recommended by the Oakfield Wind Energy Review Committee and advanced by the Applicant in a letter to the MDEP Project Manager.

On February 16, 2012, Petitioners submitted appeals challenging the Department's Order approving the Amended Oakfield Wind Project and Transmission Line Project. As part of their appeals, the Petitioners have also requested that the Board of Environmental Protection [the "Board"] hold a public hearing in this matter.

For the reasons stated below, however, the Town of Oakfield respectfully requests that the Board deny the Petitioners' requests for a public hearing and their appeals in their entirety, and instead affirm the Department's January 17, 2012 Approval Order.

II. THE TOWN OF OAKFIELD'S LOCAL REVIEW

As noted above, the Town of Oakfield conducted its own local review process of the Oakfield Wind Project (2009) and the Amended Oakfield Wind Project (2011), in addition to actively participating in the Department's review processes. Unlike the Petitioners, the Town participated fully in the administrative proceedings before the Department by exercising due diligence through its Oakfield Wind Energy Review (that incorporated detailed review of the Application by acoustical and civil engineering experts). At the conclusion of that local Review, the Town provided the Applicant and the Department with technical information, along with recommendations on Evergreen's applications that were ultimately made part of the Department's Approval Orders.

Further, in addition to failing to request a public hearing and perform due diligence to submit record materials during the Department's review, the Petitioners elected not to participate in the Town of Oakfield's own local review processes, despite having multiple opportunities to do so as detailed below. It is perhaps understandable that the Town residents in Oakfield would have been fully participatory in the Department's review process, whereas Petitioners would have taken an inactive role in the administrative proceedings before the Department.

After all, 40 of the 50 wind turbines are located in the Town of Oakfield and its 737 residents[1] of the Town stand to be more directly affected (both by virtue of the Amended Project's potential impacts and by the Community Benefits that are detailed in the Community Benefits Agreement for the 2011 Amended Project on file with the Department).

By contrast, the three incorporators of the "no member" corporate Petitioner (Protect our Lakes) are Donna Davidge and Peter and Cheryl Connelly. Notably, Donna Davidge and the Connellys reside outside of Maine for many months of the year, spending more limited time in Maine than most all Town of Oakfield residents. Donna Davidge resides in New York for a substantial portion of the year; the only other incorporators (Peter and Cheryl Connelly) reside much of the year in Florida. They are the only other incorporators of Protect our Lakes, a 2012 entity incorporated as a "no member" non-profit corporation by Attorney Lynne Williams. Not surprisingly, in comparison to many residents of the Town of Oakfield and other neighboring communities, neither Petitioner Davidge nor the Connellys were participants at either the 2009 or 2011 public meetings of the Oakfield Wind Energy Review Committee.

[1] Population provided for the Town of Oakfield according to The Maine Register (Tower Publishing, 2012 edition), page 233.

A. THE TOWN OF OAKFIELD'S 2009 REVIEW OF THE OAKFIELD WIND PROJECT.

In 2009, Evergreen proposed a 34-wind turbine project in the Town of Oakfield. In response to Evergreen's proposed project, the Town created the Oakfield Wind Energy Review Committee [the "Committee"] to receive public input and to conduct its own independent due diligence review of Evergreen's 2009 proposed wind energy facility. The purpose of the Committee was to review local siting and environmental concerns related to Evergreen's proposed wind energy facility in Oakfield, and to report and make recommendations to the Selectmen for appropriate actions with respect to these local concerns.

Specifically, the Committee was formed to:

(1) Receive input from Oakfield residents and members of the public on project-related siting and environmental concerns;

(2) Review appropriate portions of Evergreen's applications to the MDEP for permit approvals as they relate to local siting and environmental concerns;

(3) Request and review Evergreen's responses to local siting and environmental concerns;

(4) Consult with any 3rd party review consultant(s) engaged by the Town on specific project-related issues; and

(5) Report and make recommendations to the Selectmen for appropriate actions.

Consistent with the Committee's charge, it hired Ken Kaliski, P.E., of Resource Systems Group of Vermont to address sound and noise issues, Jonathan Edgerton, P.E., of Wright-Pierce in Topsham, Maine to address other issues relating to the siting of wind turbines in Oakfield, and the law firm of Eaton Peabody to address legal matters. Collectively, these consultants provided technical and legal support for the Committee's due diligence review.

In its 2009 Review, the Committee held 10 public meetings focused on design, siting, operational, and maintenance issues relating to Evergreen's proposed wind energy facility.

During this review, the Committee received input from its expert consultants, Evergreen and its consultants, as well as from members of the public. The Committee and its consultants, as well as Evergreen and its consultants, also received and answered questions from the public with respect to the project, including any information requests made by members of the public. Further, the Committee reviewed Evergreen's MDEP applications, requested and reviewed additional information from Evergreen and the general public, posed questions to Evergreen, the Department, and the general public, and then deliberated and prepared a written report of the Committee's review and ultimate recommendations.

The Petitioners, Protect our Lakes[2] and Donna Davidge, did not participate during the Town of Oakfield's 2009 Review Process. Notably, each meeting of the Committee was publicly noticed, and information on the process was readily available on the Town of Oakfield's website. *See* http://oakfieldme.org/.

The Committee issued its Final Report in September 2009; that 46-page Report included technical information and specific recommendations to address local concerns with Evergreen's proposed project, including concerns regarding wildlife and wetland impacts. Notably, this report was submitted to the Department and is properly part of the record in this proceeding, as it is part of the original record regarding Evergreen's 2009 project application as recently amended.

Oakfield's recommendations included a list of appropriate actions that were forwarded by the Town to both Evergreen and the Department with requests for their inclusion in Evergreen's then current applications as amendments, as well as any approval orders issued by the Department. Evergreen subsequently amended its MDEP applications to include these appropriate recommendations, which also became part of the Department's Final Order in 2009

[2] Even though Protect our Lakes has "no members" as stated in its articles of incorporation, the Town notes that none of the incorporators (Donna Davidge, Peter Connelly, and Cheryl Connelly) participated in the Town of Oakfield's 2009 Review Process.

approving the Oakfield Wind Project. The ultimate intent of these recommendations was to ensure that the Oakfield Wind Project is a well-designed and properly sited, operated, and maintained wind energy facility.

B. THE TOWN OF OAKFIELD'S 2011 REVIEW OF THE AMENDED OAKFIELD WIND PROJECT.

In 2011, Evergreen filed an amendment application to the previously approved Oakfield Wind Project in order to increase the number of turbines from 34 to 50, the majority of which would still be located in the Town of Oakfield [the "Amended Oakfield Wind Project"]. In conjunction with this change, Maine GenLead, LLC filed an application for a transmission line from Oakfield to Chester (the Transmission Line Project).

In response to these changes, the Committee, operating under the same charge, conducted another due diligence review in 2011 consisting of 6 public meetings. To assist the Committee, it hired the same consultants (Ken Kaliski, P.E. of Resource Systems Group; Jonathan Edgerton, P.E. of Wright-Pierce; and the law firm of Eaton Peabody) to review Evergreen's amendment application for a 50-wind turbine project.

As in 2009, the Committee continued to (i) receive input from its expert consultants, Evergreen and its consultants, as well as from members of the public; (ii) provide members of the public with opportunities to question and request information from the Committee and its consultants, as well as from Evergreen and its consultants; and (iii) review Evergreen's amended MDEP application, requesting additional information from Evergreen and posing questions to Evergreen, the Department, and the general public before conducting deliberations. Notably, consistent with the Committee's prior practices, each meeting of the Committee was publicly noticed, and information on the process was readily available to the public on multiple occasions and in multiple forms of media.

The Petitioners, Protect our Lakes[3] and Donna Davidge, again did not participate in the Town of Oakfield's 2011 Review Process.

The Committee's 2011 Review resulted in a written 38-page Final Report dated October 19, 2011, which set forth additional technical information and recommendations provided by the Town to the Department. A copy of this report is attached as Exhibit #1, and is properly part of the administrative record before this Board. The Committee's 2011 Report was also subsequently reviewed by a number of residents at a Town Meeting of the Town of Oakfield on November 21, 2011, and then approved by a 80-9 vote at Town Meeting.

In response to the Town's technical information and recommendations in its 2011 Final Report, Evergreen again revised its amendment application to incorporate the Town's recommendations, which also became part of the Department's Approval Order for the Amended Oakfield Wind Project and associated Transmission Line Project. *See Letter from Juliet Browne, Esq., to Jessica Damon of MDEP (Nov. 28, 2011), and Final Department Order (Jan. 17, 2012).* As in 2009, the intent of the Committee's 2011 recommendations was to ensure that the Amended Oakfield Wind Project is also a well-designed and properly sited, operated, and maintained wind energy facility.

III. THE TOWN OF OAKFIELD WERC CONDUCTED A METICULOUS, SCIENTIFIC, AND TRANSPARENT REVIEW PROCESS

The review processes outlined above were the result of Oakfield's deliberate, practical, and sound review in response to the wind energy facility proposed by Evergreen. The Town focused its review on using scientific and rational approaches, and rejected positions based on speculation or unsupported assumptions. In short, the Town sought and applied the best information available in order to complete its due diligence review, generate credible technical

[3]None of the incorporators of Protect our Lakes (Donna Davidge, Peter Connelly, and Cheryl Connelly) participated in the Town of Oakfield's 2011 Review Process either.

information, and make informed recommendations that ultimately were incorporated in Department Approval Orders to address Oakfield's concerns. Notably, this was a transparent process, with the work of the Committee conducted at public meetings that allowed numerous opportunities for the public to provide comments, ask questions, and request additional information.

The Committee's work was detailed and meticulous: its recommendations covered everything from maintaining public access, to wildlife and wetland impacts, to sound and noise issues. At Oakfield's Town Meeting in 2009, the voters of Oakfield approved the Committee's Final Report, as well as the community benefit and Town road authorization agreements necessary to support and enable the Oakfield Wind Project to be constructed and operated. Similarly, in 2011, the voters again approved the Committee's Final Report, as well as the community benefit and Town road authorization agreements to support the Amended Oakfield Wind Project. Although not raised by the Petitioners in their appeals, the approved community benefit agreement plainly satisfies the tangible benefit standard in the Site Location of Development Act; this agreement was the result of long, intense negotiations that occurred independent of the Town's due diligence review processes outlined above.

The Town of Oakfield, through separate review processes conducted by its Wind Energy Review Committee and its Board of Selectmen, respectively, supported a process to address (1) the potential environmental and human impacts associated with the Amended Project, and (2) the socio-economic impacts by negotiating a favorable Community Benefits Agreement for the host community. As a result, the Town residents overwhelmingly approved at Town Meeting both (1) the 38-page report of the Wind Energy Review Committee, and (2) the Community Benefits Agreement. Both of these elements are properly echoed in the Department's final Order

approving the Amended Project. The Town and its 737 residents strongly support both the Amended Project and the Department's Approval Order and asks that the Board deny all requests of the three Petitioners and affirm the Department's approval order.

IV. PETITIONER "PROTECT OUR LAKES" IS NOT AN AGGRIEVED PERSON

As a threshold matter, the petitioner "Protect our Lakes" is not an aggrieved person for standing purposes and is not capable of asserting claims on behalf of any other person or party.

Protect our Lakes does not contend that it is an aggrieved person itself, but instead asserts that its "members" will be harmed as a result of the Amended Oakfield Wind Project. An organization, however, only has representational standing "when its members would otherwise have standing to sue in their own right" and "the interests at stake are germane to the organization's purpose." *Friends of the Earth v. Laidlaw*, 528 U.S. 167, 180-81 (2000); *see also Conservation Law Found. v. Town of Lincolnville*, 2001 WL 1736584 (Me. Super. 2001), and *Friends of Lincoln Lakes v. Town of Lincoln,* 2 A.3d 284 Me. (2010), attached as Exhibit #2.

Under Maine law, a non-profit organization may incorporate with or without members. 13-B M.R.S. § 402(1). If a non-profit elects not to have members, the articles of incorporation shall set forth this fact. Similarly, if a non-profit elects to have members, the articles of incorporation must designate the classes of membership (if any) the manner of election or appointment, and the rights held by its members. 13-B M.R.S. § 402(1).

Here, the articles of incorporation for Protect our Lakes specifically state that "there shall be no members." *See Exhibit #3, the Articles of Incorporation for Protect our Lakes.* Without any members, Protect our Lakes cannot assert that it has representational standing. *See Friends of Lincoln Lakes v. Town of Lincoln,* 2 A.3d 284, 287 (Me. 2010). Further, even if Protect our Lakes did have members (which it does not), Protect our Lakes has failed to identify a specific

member in order to vicariously claim aggrieved person status. *See Petitioners' Appeal at p. 1-2* ("There are members who own lakefront property or other non-lakefront property that will have views of at least some of the turbines. Other members live in various Maine towns and cities but recreate in the project area. The members of the association will be negatively impacted by the Project and are therefore aggrieved parties.")

Protect our Lakes, in its appeal, has done nothing more than make unsupported statements that it has "members" and that one or more of its "members" may be "aggrieved persons," statements which are directly contradicted by its own articles of incorporation. Thus, there is no actual evidence that anyone other than perhaps the Connellys (as the only other incorporators of Protect our Lakes) and Donna Davidge individually is appealing.

Unsupported statements are not sufficient to satisfy the obligation of a petitioner to demonstrate that it is an aggrieved person and therefore has standing to pursue an appeal to this Board. Petitioner Protect our Lakes has failed to meet this requirement, and therefore its appeal should be dismissed.

V. PETITIONER DONNA DAVIDGE IS NOT AN AGGRIEVED PERSON

Petitioner Donna Davidge has not demonstrated that she will suffer any particularized injury, which is necessary to demonstrate that she is an "aggrieved person" to bring an appeal to this Board.

To be an "aggrieved person", a petitioner must demonstrate that they will suffer a particularized injury. A "particularized injury" is harm that is fairly traceable to the governmental action and also, in fact, a harm distinct to an individual as opposed to a harm posed to the general public. *See Friends of Lincoln Lakes v. Town of Lincoln,* 2 A.3d 284 (Me. 2010). This requirement is only met when there is a prejudicial and direct affect on a party's

property, pecuniary, or personal rights. *See Storer v. Dept. of Envt'l Prot.*, 656 A.2d 1191, 1192 (Me. 1995) ("The agency's action must actually operate prejudicially and directly upon a person's property, pecuniary or personal rights."); *see also Nergaard v. Town of Westport Island*, 2009 ME 56 ¶ 18, 973 A.2d 735.

Here, Donna Davidge has not demonstrated how the Amended Oakfield Wind Project will operate to prejudicially and directly affect her property, pecuniary, or personal rights. Ms. Davidge represents that she is the proprietor of a historic property in the Town of Island Falls known as the Sewall House; however, this property (1) is not an abutting property to the Amended Oakfield Wind Project, and (2) has no visibility of the Project. *See Department Order at p. 18.* Ms. Davidge has also not demonstrated how any of her pecuniary or personal rights may be prejudicially and directly affected by the Project. Thus, as a non-abutter and without being able to see the actual Project, Donna Davidge can hardly complain she will suffer any particularized injury due to scenic impacts. Further, her property itself is not a scenic resource that could be harmed by the Amended Oakfield Wind Project if she could see the project.

Donna Davidge's general statements that she visits Mattawamkeag and Pleasant Lakes does not demonstrate that she has suffered any prejudicial and direct harm to any of her property, pecuniary, or personal rights that is fairly traceable to the Amended Oakfield Wind Project and is in fact distinct from any harm to the general public. Accordingly, Petitioner Davidge is not an "aggrieved person" capable of having standing to sustain an appeal of the Department's Approval Order on the Amended Oakfield Wind Project.

VI. THE BOARD SHOULD DENY THE REQUEST FOR A PUBLIC HEARING

Petitioners have asserted that credible conflicting technical information regarding licensing criteria exists to necessitate a public hearing; however, a review of their appeal

demonstrates that the Petitioners have not set forth or identified any credible conflicting technical information that would even allow the Board to exercise its discretion and hold a public hearing.

The rules governing the Petitioners' request for a public hearing are clear. First, the question on whether to hold a public hearing is plainly a discretionary function of the Board. *See* 06-096 CMR Ch. 2, § 7.B ("Public hearings are discretionary unless otherwise provided by law.") Second, in order to request a public hearing, a petitioner must show that:

> (1) credible conflicting technical information regarding a licensing criterion exists, and
> (2) it is likely that a public hearing will assist the decision maker in understanding the evidence.

06-096 CMR Ch. 2, § 7.B.

Here, the Petitioners have relied on their own asserted policy arguments that this Board should hold a public hearing due to purported LURC practices[4], proposed LNG facilities, and the mere existence of the Expedited Wind Energy Act. *See Appeal at pp. 16-17.* Petitioners also appear to rely on a policy inference that, because public hearings were not conducted by the Board for prior wind projects governed by the Expedited Wind Energy Act, the Board itself has somehow generally determined that there is no credible conflicting technical information regarding licensing criteria with respect to any wind energy projects – a false inference that attempts to convince the Board that a public hearing is therefore needed in this appeal as a remedy. *See Appeal at pp. 17.*

These policy assertions by the Petitioners, however, miss the point perhaps in an attempt to confuse the public hearing standard. The actual standard requires that the Petitioners

[4] Petitioners' assertion that LURC conducts public hearings on every application submitted under the Expedited Wind Act is incorrect. *See e.g.,* Stetson Wind II Development Permit DP 4818.

themselves bear the burden of setting forth or, at the very least, identifying the specific credible conflicting technical information regarding a licensing criteria.

In their appeal, the Petitioners have not pointed to any evidence that meets the credible conflicting technical information standard – they have only made broad policy arguments about why they think a public hearing is warranted. Further, the Petitioners have not explained how a public hearing would even assist the Board in understanding the evidence in order to satisfy the second prong of Section 7.B (stated above) in a public hearing request.

In a request for a public hearing, the rules also require "summaries of all proposed testimony, including the name and qualifications of each witness." 06-096 CMR Ch. 2, § 24.B(5). The Petitioners, however, have failed to meet this standard in their request as well.[5]

Further, even if a public hearing was conducted in this matter, the scope would be limited to information that qualifies as supplemental evidence as set forth in the Chapter 2 of the Department's rules. Petitioners, however, have also not identified any supplemental evidence that would meet this criterion.

Section 24.B(5) of Chapter 2 plainly states that the Board *may* allow the record to be supplemented "when it finds that the evidence offered is relevant and material that:

(a) the person seeking to supplement the record has shown due diligence in bringing the evidence to the attention of the Department at the earliest possible time; or
(b) the evidence is newly discovered and could not, by the exercise of reasonable diligence, have been discovered in time to be presented earlier in the licensing process."

06-096 CMR Ch. 2, § 24.B(5).

[5] The only statements made by the Petitioners are vague references that an ornithologist may testify on wildlife issues and that an independent visual impact specialist may testify on scenic issues; such statements, however, do not satisfy the standards in Chapter 2 that require summaries of proposed testimony together with the name and qualifications of each witness.

The Petitioners have not met either of the above requirements. First, although Petitioners had the opportunity to do so, they did not request that the Department hold a public hearing in its review of the Amended Oakfield Wind Project that would allow the Petitioners to offer witness testimony or conduct cross-examinations. Moreover, there is no record evidence showing that the Petitioners even attended the Department's public meeting for the Amended Oakfield Wind Project held on August 3, 2011, at the Oakfield Community Center. *Compare Attendance List of the Department's August 3, 2011 Public Meeting.* Second, the Petitioners have not explained, nor have they demonstrated, why they were unable to submit their supplemental evidence to the Department during the Department's review. Third, the Petitioners have not identified any newly discovered evidence that they were unable to present to the Department during its review.

Moreover, in comparison to the exhaustive review performed by the Town of Oakfield (through its Wind Energy Review Committee and technical experts Ken Kaliski and Jonathan Edgerton) in both 2009 and 2011 explained in more detail below, counsel for the Town cannot find, after a review of the appeal filing, the kind of specific and credible conflicting technical information that would support either a public hearing or a meaningful review of the issues raised in the appeal. While anyone can suggest the possibility that there may be evidence that a theoretical project impact could affect some scenic, wetland, wildlife, or other natural resource, the well-established standard in Chapter 2 for a public hearing is that specific credible conflicting technical information must be identified in relation to licensing criteria – in this case, those provided in the Site Location of Development Act and Natural Resources Protection Act laws and regulations administered by the Department. The Petitioners have not met this standard.

Thus, for each of the above reasons, the Petitioners have failed to meet the standards that would even give reason for the Board to exercise its discretion and hold a public hearing in this

appeal. Accordingly, the Town of Oakfield respectfully requests that the Board deny the Petitioners' belated request for a public hearing.

VII. ISSUES RAISED BY THE PETITIONERS

With respect to the issues raised by the Petitioners, the Town and its WERC are familiar with each and all of those issues and, after comprehensive reviews of the Project in both 2009 and 2011, the Town and its WERC have resolved any local concerns in Oakfield as to those issues. Further, it is clear that the Department's January 17, 2012 findings and conclusions regarding scenic resources, wetlands, wildlife, and financial capacity are amply supported by the administrative record before the Department in this matter.

As detailed above, the Town's Wind Energy Review Committee have had the opportunity to consider all of the issues raised by Petitioners. Further, as noted, none of the Petitioners made any comments, asked questions, or requested information from Oakfield and its consultants, or from Evergreen and its consultants, during the Town's 2009 and 2011 due diligence review that included these four subject areas. Notwithstanding the Petitioners' lack of participation in the Town's processes, the Town and its consultants did review Evergreen's application materials with respect to scenic resources, wetlands, wildlife, and financial capacity. *See e.g., Town of Oakfield Wind Energy Review Committee, Wind Energy Workshop Session: Final Report at pp. 33-34 (Sept. 4, 2009).*

From the beginning, the Committee and its consultants recognized that the existing regulatory framework provided a thorough review of the Original and Amended Oakfield Wind projects in the areas of scenic impact, state and federal wetland permitting, wildlife, and financial capacity. For instance, as evidenced in the Town's 2009 and 2011 Reports, Oakfield considered any potential avian strike and wetland impacts, and found that the Department's post-

construction protocols were sufficient to address these issues. Excerpts of the 2009 and 2011 Committee reports regarding these matters are attached as Exhibit #4.

Further, because of the Committee's 2009 review of Evergreen's original application, when the Committee was again presented with the complete table of contents of Evergreen's amended application presenting the entirety of the evidence as to all substantive review criteria, the Committee's informed perspective resulted in selection of the following major issues to be addressed locally:

- Sound and Noise;
- Wildlife (including Bird and Bat considerations);
- Natural Resources (including wetlands and buffer areas);
- Stormwater Management;
- Blasting;
- Shadow Flicker;
- Public Safety and Public Access;
- Impacts to Town Ways;
- Wind Energy Facility Operation and Maintenance; and
- Decommissioning

In essence, the Committee determined that the Department's review as to scenic, wildlife, wetlands, and financial capacity subject areas would be sufficient and that local review would be unnecessarily duplicative. Indeed, as shown in the Department's January 17, 2012 Approval Order and the applicants' application materials, all of the Department's findings and conclusions concerning scenic, wildlife, wetland, and financial capacity standards are well-supported by the administrative record.

VIII. SPECIFIC COMMENTS AS TO THE STATE OF THE ADMINISTRATIVE RECORD AND PETITIONERS' CLAIMS REGARDING SCENIC IMPACTS, WILDLIFE, VERNAL POOL IMPACTS, AND FINANCIAL CAPACITY

None of Petitioner's assertions is persuasive to the Town in light of the Town WERC's detailed review of the Application, the Amended Project, and the potential impacts to the human or natural environment. After detailed review in 2009 and 2011 of the Original Project and the

Amended Project, the Town and its WERC are familiar with each of the asserted issues raised by Petitioners and resolved questions in each of the foregoing areas. Counsel for the Town also note that these issues are not supported by any credible evidence in the record of this administrative proceeding.

A. SCENIC IMPACTS

There are multiple sources to support the Department's careful finding that the Amended Oakfield Wind Project will not have adverse significant adverse impacts on scenic resources.

First, the Licensee conducted a Visual Impact Assessment ["VIA"] and an Interceptor Survey. Second, the Licensee carefully analyzed the classification of scenic resources in the area, including especially Mattawamkeag and Pleasant Lakes, as well as both the dimension of the wind turbines and the distance of the turbines from a point of public viewing from a scenic resource in accordance with the relevant regulatory requirements for proper assessment. Third, the Department Staff engaged Dr. James Palmer, a highly reputable scenic impact assessment expert, who evaluated the VIA prepared by the Licensee and independently conducted his own review of on scenic impacts. Dr. Palmer's review report and emails to Department Staff provide further context for and support of the appropriate conclusions from the Licensee's VIA, Interceptor Survey, and overall scenic impact analysis. Finally, the Department staff itself has experience in applying the established the relevant scenic impact standards and, in their findings, appropriately relied on abundant evidence in the record.

The record evidence considered by the Department demonstrate that users of Mattawamkeag Lake will only have partial views of the Amended Oakfield Wind Project confined to a limited segment on the horizon, and that any visible turbines "will generally appear to be relatively small to moderate-sized objects on the horizon...[and] will be too distant to

create the feeling that they are 'looming' over users of the lake." *Scenic Review by Dr. Palmer at 22-23.* With respect to Pleasant Lake, the record materials also demonstrate that the scope of the view of the turbines from this lake "is not sufficient to create a sense of being surrounded by turbines…[and] the turbines will be too far away to give a sense of 'looming' over users of the lake." *Scenic Review by Dr. Palmer at 20.*

In comparison to the Department's comprehensive review, the Petitioners have produced no credible conflicting technical information, no summary of proposed testimony, and no name or qualifications for any witness to be proffered in this proceeding with respect to scenic resources.

B. WILDLIFE

The administrative record also amply supports the Department's findings and conclusions on this subject.

The Petitioners' main complaint is that the Licensee should perform studies to determine whether curtailment of turbine operation should be required to address possible impacts to bats. *See Appeal at pp. 9-10.* The Petitioners, however, have failed to recognize that the Licensee has taken a more conservative approach than simply doing studies, and has instead elected to implement a curtailment program to mitigate any impacts to bats. Specifically, this program calls for curtailment from one-half hour before sunset to one-half hour after sunrise (from May 1st to September 30th) under appropriate conditions, in a manner consistent with IF&W's comments.

C. VERNAL POOL IMPACTS

The Petitioners' claim that the mitigation parcel in the Licensee's application is insufficient to address impacts to significant vernal pools; however, a review of the Licensee's

application shows that the Petitioners misunderstand the purpose of the mitigation parcel and the rules that govern when mitigation is required for impacts to significant vernal pools under NRPA.

Contrary to Petitioners' claims, the mitigation parcel is not intended to address any impacts to significant vernal pools, because the Licensee has already minimized those impacts to the degree where mitigation is not required under NRPA. Instead, the mitigation parcel in the Licensee's application addresses impacts to other wetlands and other significant wildlife habitat, such as Deer Wintering Areas and Inland Wading Bird and Waterfowl habitat. *See Maine GenLead Application, Section 7, Appendix 7-6.*

Accordingly, the Department's findings and conclusions regarding vernal pool impacts are well-supported by the evidence in the administrative record.

D. FINANCIAL CAPACITY

The Petitioners' claims regarding financial capacity are also unfounded. The Town reviewed this consideration and, in light of First Wind's assets and track record of financing and developing several other projects in Maine, the Town is satisfied that Applicant has adequate financial capacity to carry out this Project. Specifically, First Wind (the parent company of Evergreen) currently holds assets in excess of $1.8 billion and its Chief Financial Officer has submitted a letter of intent describing First Wind's objectives to develop and finance the Amended Oakfield Wind Project for construction and operation. Further, the Department has already imposed a condition of approval that requires the Licensee to submit evidence that it has secured financing for the Amended Oakfield Wind Project prior to construction. Notably, this condition requires the very relief that the Petitioners have sought in their appeals: further documentation of financial capacity.

Accordingly, the Department's findings and conclusions, including conditions of approval, with respect to financial capacity are well-supported.

IX. CONCLUSION

The Town of Oakfield exhaustively examined any and all impacts to the human and natural environment with respect to the Amended Oakfield Wind Project that is the subject of these appeals. As the Board knows, 40 of the 50 wind turbines are located in the Town of Oakfield, and so the core of the project is within the Town. In stark contrast to the Petitioners, the Town took a proactive, scientific, and rational approach and performed its due diligence in order to ensure that its residents' earlier concerns were evaluated and its technical information and recommendations were considered and ultimately incorporated by the Department. In this regard, the Town of Oakfield respectfully requests that the Board reflect on and give weight to the Town's exhaustive review. Quite simply, the Town and its Wind Energy Review Committee support both the Amended Project and the Department's Approval Order.

Finally, given the state of the record in this proceeding, and the lack of "credible conflicting technical information" or any specifically identified experts or witness summaries from Petitioners, the Town urges the Board to uphold the Department's competent findings and conclusions and to reject the asserted claims of the Petitioners as unsupported by both the record and any competent evidence from the Petitioners.

For each of the reasons stated in this response, the Town of Oakfield respectfully requests that the Board DENY the Petitioners' requests for a public hearing, DENY the Petitioners' appeals in their entirety, and AFFIRM the Department's January 17, 2012 Approval Order.

Respectfully submitted this 6th day of March, 2012.

TOWN OF OAKFIELD, MAINE

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EXHIBIT 1

2011 REVIEW OF EVERGREEN WIND POWER II, LLC'S
PROPOSED WIND ENERGY FACILITY
IN OAKFIELD, MAINE

FINAL REPORT
OCTOBER 19, 2011

TOWN OF OAKFIELD
WIND ENERGY REVIEW COMMITTEE

P.O. BOX 10
OAKFIELD, ME 04763

2011 REVIEW OF EVERGREEN WIND POWER II, LLC'S PROPOSED WIND ENERGY FACILITY IN OAKFIELD, MAINE

FINAL REPORT

October 19, 2011

PROLOGUE

Currently, the Town of Oakfield does not have any local zoning or site review ordinances that address wind energy facility developments; however, Oakfield is considering the adoption of a wind energy facility operations ordinance to provide the Town with local regulatory control for large wind projects. With respect to site review standards, the only regulatory review available is by the Maine Department of Environmental Protection ["Maine DEP"] under the Maine Site Location of Development Act and Natural Resource Protection Act.

This report was developed as a supplement to the September 4, 2009 Final Report of the Oakfield Wind Energy Review Committee [the "Oakfield I" review],[1] and was produced in order to (1) identify local concerns related to Evergreen Wind Power II, LLC's revised 2011 wind energy facility proposed within the Town of Oakfield, Maine, (2) provide information about these local concerns to the Oakfield community, and (3) provide recommendations for how to address these local concerns.

Consistent with its purpose, the Oakfield Wind Energy Review Committee [the "Committee"] decided to conduct a due diligence review process of Evergreen Wind Power II, LLC's 2011 ["Evergreen II"] proposed wind energy facility (as revised from Evergreen II's 2009 proposal). The Committee has been charged with collecting information from the public, reviewing Evergreen II's applications to the Maine DEP, requesting and reviewing information from Evergreen II, and then reporting and making any recommendations to the Board of Selectmen. Specifically, these recommendations would include appropriate actions that would be forwarded to Evergreen II, and the Maine Department of Environmental Protection with requests for their inclusion in Evergreen II's current applications (as amendments) and any approval orders issued by the Maine Department of Environmental Protection with respect to the 2011 wind project.

In furtherance of its charge, the Committee re-hired the same firms that assisted the Committee in its 2009 review. To address sound and noise issues, the Committee engaged Ken Kaliski, P.E., of Resource Systems Group based out of White River Junction, Vermont. For general engineering issues, the Committee engaged Jonathan Edgerton, P.E., of Wright-Pierce, which is based out of Topsham, Maine. To address any legal issues, the Committee engaged Andrew Hamilton, Esq., and Jonathan Pottle, Esq., of Eaton Peabody based out of Bangor, Maine.

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[1] A copy of the Committee's September 4, 2009 Final Report is available at, http://oakfieldme.org/vertical/Sites/%7BD2794B8C-60B4-4246-A7A2-B97C2A034DA9%7D/uploads/%7BA4C2873F-C6D4-4193-9916-5FDC78EA6ED9%7D.PDF.

INTRODUCTION

I. Chronology of Events Before the Oakfield Wind Energy Review Committee's 2011 Review

In the summer of 2009, the Town of Oakfield created the Wind Energy Review Committee to conduct a due diligence review process of Evergreen Wind Power Wind II, LLC's[2] ["Evergreen II"] proposed wind energy facility. The Committee's 2009 review resulted in a Final Report dated September 4, 2009, which consisted of a series of recommendations that were forwarded to the Board of Selectmen, Evergreen II, and the Maine Department of Environmental Protection ["Maine DEP"]. Several of these recommendations were incorporated into Evergreen II's Site Location of Development application, which was ultimately approved by the Maine DEP and upheld by the Maine Supreme Judicial Court (sitting in its appellate capacity as the Law Court).

In June 2011, Evergreen II submitted an amendment to their previously approved 2009 project to the Maine DEP [the "Revised Project"].[3] In general, Evergreen II has proposed to change the project by:

- Erecting 3.0 MW Vestas wind turbines, replacing the previously proposed 1.5 MW General Electric wind turbines
- Increasing the number of wind turbine sites within the Town of Oakfield from 34 to 40
- Adding 10 wind turbine sites in Township 4, Range 3, an unorganized territory that is immediately south of the Town of Oakfield
- Changing the footprint of turbine pad sites, road widths, and some road locations
- Adding temporary and permanent MET towers
- Eliminating the northern substation and adding a new substation location
- Changing the point of electrical interconnection with the grid
- Constructing a transmission corridor (applied for by Maine GenLead, LLC, a subsidiary of First Wind Energy, LLC)

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[2] Evergreen Wind Power II, LLC is a Delaware corporation registered to do business in the State of Maine, and is a subsidiary of First Wind Energy, LLC, a Delaware Corporation with a principal place of business in Boston, Massachusetts.

[3] A copy of these amendment materials is available at, http://www.maine.gov/dep/blwq/docstand/sitelaw/Selected%20developments/oakfield-wind-amendment/index.htm.

In short, the Revised Project will be larger in terms of the number of wind turbines and the size of those turbines, resulting in a 120 MW wind energy facility within the Town of Oakfield.

In response to Evergreen II's Revised Project, the Board of Selectmen requested that the Oakfield Wind Energy Review Committee convene and review the proposed changes in Evergreen II's June 2011 Maine DEP application [the Committee's "2011 Review"].

II. 2011 Committee Appointments

Table 1 below shows the names, addresses, and occupations of the members chosen by the Selectmen to serve on the Committee for the 2011 Review.

Table 1 – Committee Members.

Name	Address	Occupation
Jim Sholler –Selectmen	257 Thompson Settlement Road Oakfield, ME 04763	Retired B&A Railroad – Carmen
Linwood Hersey – Selectmen	24 Norman Street Oakfield, ME 04763	Retired Maine State Trooper
Anthony White – Planning Board Member	69 Ridge Road Oakfield, ME 04763	Katahdin Forest Products – Manager
Robin Crandall – Planning Board Member	216 Brown Road Oakfield, ME 04763	Retired Homemaker
Kirby Hardy – Planning Board Member	92 Spaulding Lake Oakfield, ME 04763	Independent Logging Contractor
Cathy Briggs (1st Alternate)	103 Spaulding Lake Road Oakfield, ME 04763	Self-employed Contractor
Gina Clark (Alternate)	270 Ridge Road Oakfield, ME 04763	Self-employed Contractor

III. The Committee's Charge

The purpose of the Committee remains unchanged from 2009, which is to review local siting and environmental concerns related to Evergreen II's commercial wind energy facility in Oakfield and to report and make recommendations to the Selectmen for appropriate actions with respect to these local concerns.

Specifically, the Committee will continue to:

(1) Receive input from Oakfield residents on project-related siting and environmental concerns;

(2) Review appropriate portions of Evergreen II's applications to the Maine DEP for permit approvals as they relate to local siting and environmental concerns;

(3) Request and review Evergreen II's responses to local siting and environmental concerns;

(4) Consult with any 3rd party review consultant(s) engaged by the Town on specific project-related issues; and

(5) Report and make recommendations to the Selectmen for appropriate actions.

Consistent with the Committee's charge, it hired the same consultants that assisted the Committee in its 2009 Review, who were Ken Kaliski, P.E., of Resource Systems Group ["RSG"] to address sound and noise issues, Jonathan Edgerton, P.E., of Wright-Pierce to address other issues relating to the siting of wind turbines in Oakfield and Andrew Hamilton, Esq., and Jonathan Pottle, Esq., of Eaton Peabody to address legal matters. Collectively, these consultants provide technical and legal support for the Committee's 2011 due diligence review.

IV. Meeting Schedule

In order to meet the Committee's Charge, a series of meetings were held that collectively make up the Committee's 2011 Review. Below is a summary of these meetings.

August 3, 2011	Initial meeting to convene the Committee for its 2011 Review, select consultants, and review the overall changes to Evergreen II's 2009 Oakfield Wind Project
August 8, 2011	Review of sound and noise issues associated with wind energy projects, discussion of specific changes identified in Evergreen II's 2011 Revised Project, and public hearing on the draft Oakfield Wind Energy Facility Operations Ordinance
August 15, 2011	Update on Evergreen II's responses to the Committee's data requests, discussion of other wind

	projects permitted in Maine, and additional public comments on the draft Oakfield Wind Energy Facility Operations Ordinance
September 7, 2011	Update on Evergreen II's responses to the Committee's data requests, preliminary recommendations from the Committee's consultants, discussion of draft Final Report
September 26, 2011	Review Draft Final Report, take public comments, and set final schedule for the Committee's 2011 Review of Evergreen II's Revised Project
October 19, 2011	Final Action on the Committee's Final Report and the Committee's Recommendation on Whether to Adopt the Oakfield Wind Energy Facility Operations Ordinance

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PROJECT DESCRIPTION

Evergreen II's Revised Project proposes to construct approximately 40 wind turbines within the Town of Oakfield, utilizing Vestas V112-3.0 megawatt ["MW"] wind turbines. Specifically, up to 13 wind turbine locations are proposed on the ridgeline northwest of Sam Drew Mountain (southerly of Spaulding Lake), 3 wind turbines are proposed on Sam Drew Mountain, 9 wind turbines are proposed to the northeast of Red Bridge, 3 wind turbines are proposed to the west of the Brown Road and the Hunt Ridge, 7 wind turbines are proposed along the Hunt Ridge, and 5 wind turbines are proposed to the east of the Hunt Ridge and Morrison Brook. Notably, there are 10 additional wind turbines proposed in Township 4, Range 3, which borders the Town of Oakfield to the south, which brings the total number of wind turbines for the project to 50. *(See Appendix A for a Project Map illustrating the proposed locations for each wind turbine – the "Project Area Map" Appendix A also includes a variation of the Project Area Map that shows distance contours in 500-foot intervals from the proposed wind turbines to dwellings.)* The capacity or potential power output of the proposed project is estimated to be up to approximately 150 MW of electricity, 120 MW of which is proposed within the Town of Oakfield.

Evergreen II's Revised Project also includes the construction of an electrical collector system, up to 5 permanent MET towers, up to 4 temporary MET towers, an electrical substation, an operations and maintenance building, and road construction for erecting wind turbines and for operation and maintenance access (including a combination of new roads, road upgrades, and road maintenance). *(See Appendix A, the Project Area Map, for locations of these structures.)*

Evergreen II anticipates that about 10,932 square feet (or 0.25 acres) of wetlands will be permanently filled, 25,928 square feet (or 0.60 acres) of wetlands will be temporarily filed, 4.01 acres of vegetation will be cleared, and 383 linear feet of stream channel will be culverted. Compensation for these impacts is being proposed through preservation of a 2100 acre parcel of land in Drews Plantation, which is immediately located to the east of Macwahoc, Maine.

Electricity generated in Evergreen II's Revised Project is proposed to be collected at a substation on the South Oakfield Road, which would then be transmitted by a transmission line to the Keene Road Substation in Chester, Maine, where it would tie into the existing Bangor Hydro Electric system. *(See Appendix B for a Project Map illustrating the proposed location of the Transmission Corridor – the "Transmission*

Corridor Map".) Maine GenLead, LLC[4] has separately applied to the Maine DEP for this transmission corridor from Oakfield to Chester.

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[4] Maine GenLead, LLC is a Delaware corporation registered to do business in the State of Maine, and is also a subsidiary of First Wind Energy, LLC.

RECOMMENDATIONS ON SPECIFIC ITEMS ADDRESSED BY THE COMMITTEE

The Committee has identified the following specific items to address in its 2011 Review of the Revised Project: (I) Sound and Noise; (II) Wildlife and Natural Resources; (III) Stormwater Management; (IV) Blasting; (V) Shadow Flicker; (VI) Public Safety & Public Access; (VII) Impacts to Town Ways; (VIII) Wind Energy Facility Operation and Maintenance; and (IX) Decommissioning.

The format for the Committee's report is to provide a discussion and the Committee's specific recommendations for each of the above subject areas. The Committee also recommends that the Town ensure that Evergreen II implement all of these recommendations, and that Evergreen II makes provision for any affiliate, successor, or assign of Evergreen II to be committed to these recommendations.

I. Sound and Noise

A. Introduction

The Committee focused on the following sound and noise issues and information when reviewing Evergreen's II's Revised Project, including its noise analysis submitted to the Maine DEP:

- A peer-review of Evergreen II's predictive noise model and Evergreen's compliance with Maine DEP noise standards
- Modeling associated with normal operation and Noise Restrictive Operation ["NRO"] modes of the Revised Project
- Noise reduction and mitigation measures (including NRO)
- Available information with respect to background (or ambient) sound data
- Sound power levels by wind speed and by octave band
- Annual and seasonal wind rose for each MET tower
- Annual and seasonal wind shear and turbulence intensity
- Low frequency noise
- Post-construction monitoring protocols
- Complaint Resolution Protocols and the proposed Oakfield Wind Energy Review Operations Ordinance
- Miscellaneous noise issues relevant to the Revised Project

In addition to the above, the Committee has provided a summary of other projects in Maine that have been permitted and constructed, with the purpose of avoiding future potential issues associated with the Revised Project.

B. Analysis of Evergreen II's Predictive Noise Model and Compliance with Regulations

The applicant retained Bodwell EnviroAcoustics LLC to prepare a sound level study for this project, which is found in Section 5 of the Maine DEP application and is attached as *Appendix C* to this report. As part of this study, sound levels from the proposed project were modeled and compared to the existing Maine DEP Chapter 375.10 regulations. A copy of these regulations is attached as *Appendix D*.[5]

Modeling was conducted assuming the installation of 50 Vestas V112-3.0 MW wind turbines. The maximum rated sound power from the V112 is 106.5 dBA compared with 104 dBA from the previously permitted General Electric ["GE"] 1.5 MW wind turbine. While the overall sound power in the Revised Project has increased, the applicant provided a lower density of wind turbines in critical areas, and selective use of "noise reduced operating modes," which will be discussed later in this section.

Other than the turbine locations and respective sound power, the noise report uses the same modeling parameters used for the GE 1.5 MW turbines in Oakfield I, the original application. These included:

- Use of the Cadna A computer model, an implementation of the ISO 9613 standard;
- Use of the mean sound power at the wind speed with the highest sound output from the V112 with 5 dBA added to account for turbine and model uncertainty;
- Setting a ground absorption factor for an equal mixture of hard and soft ground (G=0.5), except for water bodies which are set as hard ground (G=0).

In a separate proceeding, the applicant's sound expert conducted post-construction modeling at Stetson I and II,[6] and compared the results with the model predictions. They found that, using the same ground absorption factor and 5 dBA addition to turbine sound power levels, the model overpredicted actual turbine sound levels by about 3 dBA or more. The Committee's expert reviewed these results and found this to be good evidence that the model used for Oakfield is likely to be similarly conservative.

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[5] For more information on the Maine DEP noise standards, see pp. 14-21 of the Committee's Final Report dated September 4, 2009, *available at* http://oakfieldme.org/vertical/Sites/%7BD2794B8C-60B4-4246-A7A2-B97C2A034DA9%7D/uploads/%7BA4C2873F-C6D4-4193-9916-5FDC78EA6ED9%7D.PDF.

[6] Stetson I and II are previously permitted and constructed wind energy projects located in the unorganized territory of Washington County, Maine, near the Town of Danforth.

In the applicant's Maine DEP application for the Revised Project, sound receptors were placed at various representative protected locations. A protected location is generally defined as a location within an adjacent property which includes a residence, place of worship, school, library, hospital, nursing home, or designated park land that is accessible by foot. The daytime standard of 55 dBA is applied at all parts of a protected location, but the nighttime standard of 45 dBA is applied no more than 500 feet from the living and sleeping quarters on the subject land. This means that on large lots, the receptor is placed as much as 500 feet from the residence, but on small lots, the receptor is placed at or near the subject property line, which can be much closer than 500 feet from the residence. The Committee discussed concerns associated with locations on Thompson Settlement Road where the property lines are less than 500 feet from the dwelling. These dwellings are near the northern turbine group where several turbines are proposed to be operated in NRO.

The results of the modeling show that the predicted hourly sound levels at non-participating protected locations can exceed 45 dBA, the Maine DEP nighttime standard. As a result, the applicant has proposed implementing "noise restricted operation" ["NRO"] to reduce the predicted nighttime sound level to 45 dBA or below. With NRO, automatic controls are implemented to change the pitch and rotor speed to lower the sound power of the turbine. The amount of NRO can be adjusted to obtain a 1 dBA to 4 dBA reduction in sound. Five turbines would be in NRO 1, five in NRO 2, and one in NRO 4. With NRO, all regulated protected locations are modeled to be at or below 45 dBA at night.

It should be noted that this does not mean that 45 dBA is achieved at 500 feet from all homes. In particular, at homes along Thompson Settlement Road, those with smaller properties, the predicted sound level exceeds 45 dBA within 500 feet. The Committee understands that non-participating homes along Nelson Road, South Road, Brown Road, Ridge Road, and Spaulding Lake Road have nighttime sound contours (with NRO) that are at or below 45 dBA within 500 feet of the non-participating homes.

The applicant was asked what additional steps could be taken for predicted sound levels to meet 45 dBA at 500 feet from these dwellings on Thompson Settlement Road. The response was that three turbines that are currently at NRO 1 and NRO 2, N13 to N15, if necessary, could be increased to NRO 4, and that no turbines would have to be eliminated. The applicant was asked to consider this as part of an agreement with the Town, but that this additional level of NRO be conducted only under winds from the south or southeast (blowing from the turbines toward these homes). With this in place, the predicted nighttime sound levels at these locations just outside homes is 44 dBA or less, and within 500 feet is 45 dBA or less.

Except for Fox Island Wind in Vinalhaven, NRO has not been used on wind turbines in Maine before. However, several recent applications have proposed NRO, including Spruce[7] and Highland.[8] Spruce has obtained a permit from DEP assuming the use of NRO as a valid method to attenuate noise. In addition, the applicant has obtained a guarantee from Vestas on the sound output during NRO modes. *(See Section 5, page 36, of Evergreen II's 2011 Maine DEP Application.)* As a result, the Committee accepts the NRO mitigation proposed by the applicant with the application of possible NRO 4 to those three additional turbines (N13 to N15) under certain wind conditions as needed to meet 45 dBA within 500 feet of the five specified dwellings on Thompson Settlement Road as described above or with substantial evidence (including collected sound data) that demonstrates noise will not exceed 45 dBA within 500 feet of the dwellings on Thompson Settlement Road, regardless of the location of property lines.

The Committee requested additional information on the number of homes where predicted sound levels exceed 55 dBA, 50 dBA, and 45 dBA. The applicant provided a table showing 4 participating camps where predictions exceeded 55 dBA during the day. At night two additional participating camps (not owned by Evergreen II or First Wind) predictions exceeded 50 dBA, and 19 participating dwellings (camps and homes) predictions exceeded 45 dBA. Based on post-construction monitoring at Stetson provided by the applicant, the Committee is comfortable that actual sound levels under full turbine sound output and site conditions favorable to sound propagation will nonetheless be within limits. The Committee has provided this information in *Appendix E* of this report, so that participating landowners can know what to expect if the Project is approved by the Maine DEP, constructed, and operated.

C. Low Frequency Noise

The applicant's noise study in its Maine DEP amendment application did not evaluate low frequency sound or infrasound as part of its standard Maine DEP application. Instead, the application includes a statement that "Independent research and testing have indicated that impacts from infrasound and low frequency sounds from wind turbines are uncommon and not likely to be of concern from a properly sited, designed, and operated wind energy facility." *(See Appendix C, Section 5, page 27, of Evergreen II's Sound Level Study contained in its 2011 Maine DEP Application.)* Although low frequency sound is not specifically regulated by Maine DEP 375.10, the Committee asked the applicant to conduct an evaluation of low frequency noise with respect to other commonly accepted standards.

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[7] The Spruce Mountain Project is a permitted wind energy facility in the Town of Woodstock, which is located in Oxford County, Maine. A copy of the permit is available at, http://www.maine.gov/dep/blwq/docstand/sitelaw/Selected%20developments/Spruce_Mountain/order.pdf

[8] The Highland Wind Project is a proposed wind energy facility in Highland Plantation, which is located in Somerset County, Maine.

The applicant responded on August 19, 2011 with additional quantitative analysis of low-frequency noise to determine whether there was any potential to create moderately perceptible noise-induced building vibration. The analysis looked at impacts at the 31.5 and 63 Hz octave bands compared to ANSI S12.2-2008, "Criteria for Evaluating Room Noise." The results showed that at all modeled receiver points, daytime and nighttime low frequency sound level predictions were below the ANSI criteria, even considering that many of these points are up to 500 feet from individual homes of non-participating landowners. These results are attached as *Appendix F.*

The Committee then asked the applicant to provide this same information for project participants. This additional data showed that predicted sound levels at 31.5 Hz exceeded the ANSI criteria at 18 structures located on participating landowners' properties. Of these, 12 are camps, 2 are unoccupied homes, one is uninhabitable, and the remainder were owned by Evergreen II or First Wind. No occupied year-round dwelling exceeded the ANSI standard. This information is also provided in *Appendix F.*

Based on this information, the Committee does not anticipate low frequency noise to be problem at non-participating dwellings; however, for participating properties, predicted low frequency sound levels will be above guidelines for noise-induced building vibration.

The Committee has provided the above low frequency information, so that landowners, including individual participants in the project, know what to expect if the Revised Project is approved by the Maine DEP, constructed, and operated.

D. Short Duration Repetitive Sounds

The applicant is proposing the Vestas V112 as a replacement to the GE wind turbine used in Oakfield I, the original application. One of the major differences between the two turbines is that the rotor diameter of the V112 is 112 meters (or approximately 367 feet), compared with the GE at 77 meters (or approximately 253 feet). This represents roughly two times the sweep area of the former turbine. In addition, the V112 nacelle sits atop a slightly higher tower for a hub height of 84 meters or approximately 276 feet) compared to the GE (80 meters or approximately 262 feet).

The Committee is concerned that the larger turbine will exhibit more amplitude modulation than previously generated by the GE wind turbines. The rotors will sweep higher in the sky to capture faster winds, but also lower towards the ground which generally has slower winds creating a modulating sound at each blade passage. At high modulation levels, this can lead to "short duration repetitive sounds" ["SDRS"] as defined by Maine DEP 375.10. Testing of the GE turbines at Stetson II under high wind shear and worst case for sound indicated only minimal SDRS events.

The Committee asked the applicant to provide additional information on the potential for SDRS, given the proposal to substitute the Vestas V112 turbines for the GE 1.5 MW turbines. The applicant and the Committee asked Vestas, as well. After a thorough literature search, the applicant's expert, Vestas, and the Town's acoustical consultant could not confirm whether amplitude modulation would increase with the V112. Vestas offered that the pitch of each blade is independently optimized. In this way, when the blade is at the top of the rotation, it is pitched to be optimized at the higher wind speed, but when it is at the bottom of the rotation, it is pitched to be optimized for the lower wind speed.

Since the level of SDRS is unknown for Vestas V112 wind turbines, the Committee recommends that SDRS monitoring be incorporated into the post-construction monitoring program. In addition, the applicant's expert indicated that some research suggests cross-wind directions can be worse for SDRS, and recommended SDRS measurements under cross-wind conditions. As such, the Committee recommends that some data be collected when the wind is approximately perpendicular to the line between the receivers and turbines.

The Committee's other concern regarding SDRS was that winds that run parallel to the ridge could cause turbulence increases due to the wake effects of upwind turbines. This could potentially lead to increased noise and amplitude modulation. The Committee asked for information as to whether turbines will be shut down during these events. The applicant provided the Committee's expert with a sector curtailment plan under a non-disclosure agreement and, at a public meeting, both Vestas and the applicant's expert confirmed that sector curtailment will be used to shut down select turbines under some wind directions and wind speeds.

Other factors have the potential to contribute to higher sound levels and a greater potential for SDRS. These could include wind shear and naturally occurring turbulence. The Committee requested that data from the project MET towers be analyzed to assess whether this site is unusually turbulent or subject to extremely stable atmospheric conditions. Under a non-disclosure agreement, the applicant provided detailed information to the Committee's expert, and presented a summary to the Town. The applicant found that the likelihood of extremes in turbulence intensity and wind shear was similar to that found in Stetson Wind where only minimal SDRS events were found. As a result, the Committee concludes that the likelihood of SDRS and excessive noise from naturally occurring wind shear and turbulence in Oakfield is similarly low.

E. Post-Construction Monitoring

The Maine DEP quiet noise standards will be in place to protect Oakfield residences from undue adverse sound levels during operation of the proposed wind energy facility. However, because the Maine DEP noise standards were not specifically intended to address potential adverse effects from wind energy facilities, and due to inherent uncertainties with predictive sound modeling, there should be a monitoring plan to address the measurement of sound levels as part of assuring compliance with the Maine DEP noise standards. A monitoring plan should:

- Address both standard post-construction monitoring and complaint resolution;
- Address each type of noise regulated by the standard, including overall sound levels, amplitude modulation (SDRS), and tonal sound;
- Collect enough information to evaluate upset or other conditions that could lead to complaints;
- Require testing during times when the turbines are generating their maximum sound power;
- Require testing during meteorological conditions that are favorable to sound propagation or that are conducive to complaints by neighbors;
- Use industry standard practices for equipment sensitivity and accuracy;
- Include simultaneous monitoring of wind speed and wind direction at the turbine hubs and representative of the sound measurement locations;
- Allow for reasonable forecasting of the proper conditions favorable for monitoring;
- Allow for appropriate flexibility within specified constraints;
- Be conducted under repeatable conditions; and
- Allow for appropriate response times in the case of complaints.

The Maine DEP approved the protocol that was agreed to between the Town and First Wind in Oakfield I. The only exception was that the Maine DEP's consultant recommended monitoring at six locations compared to the Town recommending two or more locations chosen in consultation with Maine DEP.

For the Revised Project, the applicant's expert has proposed that a sound testing protocol similar to that agreed to in Oakfield I be implemented. The Committee agrees. However, given the increased size of the project, the Committee requests that the applicant monitor more than two locations. These locations would be chosen in consultation with Maine DEP, and the Town. The locations shall initially include at least one monitoring location on or near the following roads:

- Spaulding Lake Road;
- Brown Road;
- Nelson Road; and
- South Road

At its meeting on September 26, 2011, the Committee also discussed whether more than one monitoring station may be needed on the Thompson Settlement Road, due to the number of non-participating residences and their proximity to proposed wind turbines. The Committee's consultant recommended that two monitoring stations on the Thompson Settlement Road may be needed, which the Committee believes is a reasonable request. Accordingly, the Committee recommends that two monitoring stations on or near the Thompson Settlement Road be required in any post-construction monitoring protocol.

F. Complaint Protocol

The applicant has agreed to use the same Sound Complaint Response and Resolution Protocol negotiated by the Town in Oakfield I. A copy of this protocol is provided in *Appendix G*. This is the same protocol recommended by the Committee as referenced in a proposed Wind Energy Facility Operations Ordinance, which is discussed below in the next section of this report. The purpose of the Oakfield Sound Compliant Response and Resolution Protocol is to:

(1) Provide a transparent process for reporting sound complaints to Evergreen II/First Wind;
(2) Provide a consistent approach to documenting complaints and to inform subsequent monitoring efforts;
(3) Provide a process for informing the Town and the Maine DEP of sound complaints.

Once a complaint is received, Evergreen II will provide a response, which will depend upon the particular set of circumstances contained in the complaint. Responses may include:

(1) a site visit to the location of the complaint;
(2) an inspection of the wind turbines operating near the location of the complaint;
(3) informal sound monitoring and sound evaluation; or
(4) formal sound monitoring and sound evaluation.

In the event Evergreen II conducts formal sound monitoring at a complaint location, it will notify the Town ahead of time and will provide the results to the Town. If Evergreen II conducts a visit to the complainant, or informal sound monitoring at a complaint location, it will undertake best efforts to notify the Town Manager and the Town Complaint Review Officer and allow him or her to observe. In any event, the results of the response to the sound complaint will be available for the Town's review.

The Maine DEP or Evergreen II may require sound monitoring as part of this protocol as a result of sound complaints. If sound monitoring is undertaken to determine if the Oakfield wind energy facility meets the quiet level noise standards, Evergreen II will first provide an appropriate test protocol to both the Town and the Maine DEP for review and comment and then report the testing results of the approved protocol. If the results indicate that the Oakfield wind energy facility is not in compliance, Evergreen II must submit a revised wind energy facility operation protocol to the Maine DEP that will demonstrate compliance with the Maine DEP noise standards.

The Committee has concluded that the Oakfield Wind Project Sound Complaint Response and Resolution Protocol, in conjunction with the Oakfield Wind Energy Facility Operations Ordinance explained below, is designed to adequately identify and formulate a response to any future noise issues associated with the proposed wind energy facility. In that regard, the Complaint Protocol has been modified to incorporate the Committee's recommendations in support of the Operations Ordinance, which is attached as *Appendix H.*

As a result, the Committee recommends that the Selectmen request the Maine DEP to accept and require the version of the Complaint Protocol attached in *Appendix H,* if Evergreen II's amendment application is approved. In that regard, attached is the form of the proposed letter from Evergreen II to the Maine DEP. The Committee further recommends that the Selectmen endorse the Oakfield Wind Energy Facility Operations Ordinance for adoption at Town Meeting to provide the Town with an opportunity to independently address any future noise issues through a local control measure.

G. Proposed Oakfield Wind Energy Facility Operations Ordinance

One of the major concerns of the Committee in the past was that it was relying on the Maine DEP to enforce provisions of the noise standard. The concern was, in part, that the DEP may be slow in responding to actions requiring immediate resolution.

As a result, the Committee is recommending that the proposed Oakfield Wind Energy Facility Operations Ordinance be adopted by the Town. The ordinance provides for the creation of a new Complaint Review Officer, who will have the authority to

enforce provisions of the ordinance and issue Notices of Violation (NOVs) to the wind energy facility operator. The proposed ordinance states, in part,

> "Upon any failure of the Operator to maintain compliance with the Site Law Permit, the Complaint Review Officer may issue a written Notice of Violation to the Operator describing the alleged violation and penalties imposed, if any. With respect to compliance with Site Law Permit conditions governing sound, all sound complaints shall first be processed and administered in accordance with the Sound Complaint Protocol. If the Complaint Review Officer determines that the Sound Complaint Protocol has not satisfactorily resolved a sound complaint and that the wind energy facility is not in compliance with the Site Law Permit conditions, the Complaint Review Officer may issue a written NOV to the Operator. Upon issuance of a written NOV, the Complaint Review Officer may informally meet with the Operator to address any violation. If the violation has not been abated or corrected within the specified time, the Complaint Review Officer shall report same to the Board of Selectmen for enforcement."

A copy of the proposed Oakfield Wind Energy Facility Operations Ordinance is provided in *Appendix I.*

With the provisions of this Ordinance in place, the Town of Oakfield will obtain greater authority and control in enforcing provisions of any approved Site Law permit, and can work more closely with the wind energy facility operator in resolving complaints in a satisfactory and timely manner.

Accordingly, the Committee recommends that the Selectmen endorse the Oakfield Wind Energy Facility Operations Ordinance for adoption at Town Meeting to provide the Town with an opportunity to independently address any future wind energy facility issues through local control.

H. Maine Board of Environmental Protection Recommended Rules Revisions

The Maine Board of Environmental Protection [the "BEP"] recently made a recommendation to the Maine Legislature to modify Chapter 375 Section 10 of the Department of Environmental Protection Rules relating to noise standards for wind projects. A copy of these proposed rule changes is provided in *Appendix J.* The rule changes are summarized as:

- Establishing a daytime noise standard of 55 dBA and nighttime noise standard of 42 dBA. This is calculated as an average of twelve 10-minute equivalent sound level measurements rather than the highest single 10-minute interval.
- Defining a modeling protocol to include mixed ground (G=0.5) plus inclusion of an uncertainty factor based on the manufacturer's recommendations to account for sound power uncertainty plus another 0 to 2 dBA to account for model uncertainty in inland terrain.
- Definition of SDRS and revisions to how and when tonal and SDRS penalties are applied
- Requiring sound monitoring once during the first year of operation, and then every fifth year until decommissioning
- Detailing requirements for submission of information to DEP
- Detailing requirements for a complaint resolution protocol
- Detailing the monitoring requirements

Currently, these changes have not yet been approved by the Maine Legislature and Evergreen II's Revised Project may not be subject to the amended rules, since Evergreen II's completed application is now being reviewed by the Maine DEP. Nevertheless, the Committee has reviewed the proposed rules to determine whether it should change its recommendations to the Board of Selectmen as to any additional conditions it may want to recommend. The Committee's review is summarized as follows:

1. **Proposed New Nighttime Noise Standard** – The BEP approved a change in the nighttime noise standard at protected locations from 45 dBA to 42 dBA. At the same time, however, the BEP recommends lowering the conservative factors added to the modeling results from a total of plus 5 dBA to plus 2 dBA to 4 dBA for projects located on inland ridgelines. As a result, the highest modeled nighttime levels in Oakfield would range from 42 to 44 dBA depending on the level of conservatism chosen by the applicant and accepted by Maine DEP. Given the results of the Stetson monitoring, which found that the current modeling may be overpredicting noise by at least 3 dBA, and the allowance of BEP to reduce the modeled levels by as much as 3 dBA, the Committee feels comfortable that an average nighttime sound level of no more than 42 dBA at regulated protected locations will be achieved under the recommended NRO mitigation plan. The sound level limit for the highest 10-minute equivalent sound levels (LAeq) from the project remains 45 dBA during nighttime hours.

In addition, the Committee heard testimony regarding areas where there have been noise complaints from constructed and operating wind energy facilities in Maine.

For example, in Vinalhaven, a coastal community, they found that the conservative factors (such as the plus 3 dBA adjustment factor) were not used in the predictive modeling and, what may be due to excessive coastal wind shear, the monitored levels on at least one nearby home exceeded the 45 dBA nighttime noise standard. Conversely, the predictive modeling for the Revised Project included these conservative factors, such as the 3 dBA adjustment factor.

At Mars Hill, the 45 dBA standard was waived by a variance, with the result that monitored sound levels at protected locations exceeded 45 dBA. Conversely, the 45 dBA standard will not be waived for the Revised Project. The Committee also heard testimony that if modeling was performed to predict sound levels from Mars Hill using the same parameters at Oakfield, most reported complaints would be modeled as 45 dBA or above.

The Committee reviewed an article published online suggesting that the modeling performed for the original Oakfield Project (Oakfield I) may have predicted low noise levels when compared with the Mars Hill Wind Project.[9] The Committee and its expert looked further into the author's comparison to see if any changes should be made to the modeling performed for the Revised Project (since it uses many of the same parameters as Oakfield I).

Based on its review, the Committee determined the following:

1 – It is not accurate to compare measured sound levels and model predictions from one project to another based on turbine setback distance alone. There are many factors that affect sound levels over distance at Mars Hill that are different from Oakfield, the largest being the spacing and arrangement of the wind turbines. As a result, the sound level at different receptor points located the same distance from the closest wind turbine can vary significantly. Terrain can also have an effect, which was not taken into account in the published article.

[9] *See* "Oakfield Wind: Might the Model be Too Low?", *available at*, http://randacoustics.com/oakfield-wind/.

2 – The maximum sound level for the one location about a mile from Mars Hill was taken from the Quarter 1 monitoring for that project. On review, the Maine DEP peer review identified the necessity to screen out from the Quarter 1 results other contributing factors beyond turbine sounds, including the lack of ground level anemometers and the use of small wind screens that are inadequate for higher winds. If these Quarter 1 monitoring results are removed and Quarters 2, 3, and 4 results are evaluated, the maximum level measured at the distances reported in the article are reduced from 44 dBA to 38 dBA. *(See also Mars Hill Wind Farm, Mars Hill, Maine, Sound Level Study, Compilation of Ambient & Quarterly Operations Sound Testing, dated October 15, 2008.)*[10]

3 – The final Mars Hill post-construction study shows that a model with a plus 5 dBA factor added to the turbine sound power levels, as is done in Oakfield, would have included all measured results.

4 – The health effects cited in the chart are largely unsupported at the lower sound exposures.

Collectively, this gives the Committee confidence that the 45 dBA nighttime noise limit applied by the Applicant to the Revised Project is appropriate and consistent with both the current and potential future Maine DEP noise rules. The Committee recognizes, however, that wind turbine noise will be audible at many residences, and meeting the regulations may not eliminate complaints from some.

2. **Modeling Protocols** – The modeling protocol in the BEP's proposed rules is less conservative then what has been used in both Oakfield applications (the original Oakfield I Application and the Revised Project Amendment Application). It allows up to a 3 dBA lower modeling adjustment factor and attenuation due to forestation. No forestation attenuation was assumed in either of the Oakfield applications. Other protocols are consistent with the Oakfield applications, including adjustment to the manufacturer's sound power to account for uncertainty, modeling consistent with a point source at hub height, attenuation due to ground absorption and terrain, and the assumption of mixed hard and soft ground

3. **Changes to the SDRS standard** – The BEP approved significant changes to how SDRS and tonality penalties are applied. The full 5 dBA SDRS

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[10] *Available at,* http://www.maine.gov/dep/blwq/docstand/sitelaw/Selected%20developments/Mars_Hill/cumulative_monitoring_report.pdf.

penalty is now applied if more than 5 SDRS events (typically one second each) are recorded over a 10 minute period, and the level of amplitude modulation defining SDRS was reduced from 6 dBA to 5 dBA. The current standard allows for SDRS penalties to apply only to sound levels of the SDRS events and not the 10-minute sound level. While the Committee believes that there are problems with the way the SDRS rules are currently applied to wind energy facilities, the new rule does not necessarily address these problems. However, the Committee is not proposing new rules to address SDRS, and will rely on any permit condition granted by the Maine DEP in this regard.

4. **Changes to the Tonal Sounds Standard** – The BEP is also proposing to change the tonal sounds standard by applying a tonal penalty to the entire 10-minute period if the 10-minute one-third octave band sound levels (Leq. dB) meets the definition of a tonal sound. This is different from the current regulation which has been interpreted to only apply the penalty to the seconds at which tonal sounds are present or to the tonal sound component. In the Committee's report for Oakfield I, it opposed the current interpretation of the standard, writing, "the Committee does not believe this interpretation of the 5 dBA penalty standard represents an approach that is adequately protective of the local community in Oakfield." *(See p.18 of the Oakfield Wind Energy Review Committee's Final Report dated September 4, 2009.)*

   The Committee further recognizes that, in a well-designed and properly operated and maintained wind energy facility, prominent discrete tonal sounds, regardless of the existence or rigor of the applicable regulations, should not occur. As a result, the Committee recommends that (1) prominent discrete tonal sounds, including those that implicate the Maine DEP standards and any permit conditions, should be mitigated, (2) the Oakfield Wind Project Sound Complaint Response and Resolution Protocol will help identify such tonal sounds, (3) the proposed Oakfield Wind Energy Facility Operations Ordinance, if adopted, will also help to address such tonal sounds, and (4) with these understandings, there will be sufficient measures in place to address potential tonal sounds from the Revised Project, if approved, constructed, and operated.

I. Recommendations Including Appropriate Actions

1. Low-Frequency Sound

The Committee recommends that Evergreen II gather low-frequency data during all sound level measurements consistent with the Maine DEP noise standards. This will provide sufficient data in the event low-frequency sound levels require further analysis. In addition, the Committee recommends that Evergreen II address the ANSI standard S12.2-2008 for moderately perceptible acoustically induced vibration and rattle in the 16 Hz through 63 Hz whole octave bands. Sound levels exceeding ANSI specified levels will require further investigation to determine their cause.

APPROPRIATE ACTION: **Evergreen II should collect 1/3 octave band data during monitoring carried out in accordance with Chapter 375.10 and the testing protocol. 1/3 octave band data should be reported as ten-minute equivalent sound levels (Leq) and extend at least to 20 Hz. 12 Hz is the lower third octave band limit in response to complaints of acoustically induced building vibration or rattle. For monitoring conducted in accordance with the Maine DEP noise standards, Evergreen II will report the 10-minute equivalent C-weighted sound levels (LCeq) to the Town of Oakfield for informational purposes only.**

2. Post-Construction Monitoring

The Maine DEP quiet noise standards will be in place to protect non-participating Oakfield residences from undue adverse sound levels during operation of the proposed wind energy facility. However, because the Maine DEP noise standards were not specifically intended to address potential adverse effects from wind energy facilities, and due to inherent uncertainties with predictive sound modeling, there should be a monitoring plan to address the measurement of sound levels as part of assuring compliance with the Maine DEP noise standards. The monitoring should include provisions to report the overall sound level, SDRS events, and tonal sounds.

APPROPRIATE ACTION: **Evergreen II should seek concurrence from the Maine DEP that any required post-construction monitoring protocol be consistent with the following (and if the Maine DEP does not require post-construction monitoring then Evergreen II**

should nonetheless implement a post-construction monitoring protocol consistent with the following): within 12 months from when the project commences operation, First Wind shall conduct sound monitoring at six representative locations around the project; one sound monitoring station shall be located on or near each of the following roads: (i) the Spaulding Lake Road, (ii) the Brown Road, (iii) the Nelson Road, (iv) the South Road; with (v and vi) two sound monitoring stations shall be located on or near the Thompson Settlement Road. Specific locations of each monitoring station shall be chosen in consultation with the Maine DEP and the Town of Oakfield based on how well they represent local meteorology and their relative noise impact from the wind turbines (highest potential to exceed the applicable noise standards). In addition, special consideration shall be given to landowners that have registered sound complaints. Following the initial demonstration of compliance, the number of monitoring locations may be reduced in consultation with the Town and approval by the Maine DEP if it is determined they are not necessary to demonstrate compliance. The existing permitted protocol shall be followed, which includes provisions to monitor for overall sound level, SDRS events, and tonal sounds.

For any wind turbines in which NRO will be implemented, Evergreen II shall not reduce the degree of NRO without first providing substantial evidence (including collected sound data) to the Town and the Maine DEP demonstrating that sound levels will not exceed the 45 dBA nighttime and 55 dBA daytime noise limits including at locations within 500 feet of the dwellings on Thompson Settlement Road discussed above (regardless of the location of the property lines on those parcels). If NRO is reduced, then Evergreen II shall follow-up with additional compliance monitoring at affected locations.

Sound levels (dB) from wind turbines will be compared to ANSI S12.2-2008 indoor acoustically-induced moderately perceptible vibration and rattle standard for octave band frequencies up to 63 Hz. C-weighted sound levels will be reported for information purposes only.

3. Complaint-Based Sound Measurement and the Process for Remedial Action

A major concern of the Committee is how any future noise issues will be identified and resolved in order to prevent any continuing adverse effects caused by sound generated by the proposed wind energy facility.

The Committee has concluded that the Oakfield Wind Project Sound Complaint Response and Resolution Protocol and the Oakfield Wind Energy Facility Operations Ordinance are designed to adequately identify and formulate a response to any future noise issues associated with the proposed wind energy facility. As a result, the Committee recommends that the Selectmen request the Maine DEP to accept and require this protocol attached as *Appendix H*, if Evergreen II's amendment application is approved.

APPROPRIATE ACTION: **The Selectmen shall request that the Oakfield Wind Project Sound Complaint Response and Resolution Protocol attached in *Appendix H* be included in the Maine DEP permit as a condition of approval, and recommend that the Town Meeting approve the Wind Energy Facility Operations Ordinance (which allows the Town to enforce provisions of the Protocol and to take additional measures to address any future sound complaints).**

4. Overall Sound Levels

The Committee believes that it is important for the proposed wind energy facility to adhere to the overall quiet level noise standards (45 dBA and 55 dBA during the nighttime and daytime, respectively) and that it is sensible that any turbine sounds exceeding these limits be appropriately addressed.

APPROPRIATE ACTION: **Sound Emissions: The Committee recommends that Evergreen II take affirmative steps so that the V112 turbines will perform within stated limits on overall sound power. As reflected in its application, Evergreen II expects the Vestas V112 3.0 MW turbines to operate consistent with a maximum continuous sound power output of 106.5 dBA (+/- 2 dBA), except in applicable NRO modes. The Committee recommends that Evergreen II increase nighttime NRO as needed and up to a 4 dBA reduction in turbines N13, N14, and N15 when winds are from the south or southeast, or produce substantial evidence (including collected sound data) that noise levels will not exceed applicable DEP limits and the 45 dBA at night or 55 dBA during the day within 500 feet of the dwellings on Thompson Settlement Road discussed above (regardless of the location of the property line).**

5. Tonal Sound

The Committee and Evergreen II have different views on how to apply the Maine DEP tonal sound penalties. Regardless, prominent discrete tones should not occur in a well-operated wind energy facility and, if they do develop, the best practice is to mitigate and eliminate these tones. The Committee recommends that Evergreen II utilize Vestas V112 3.0 MW turbines that reflect appropriate design adjustments to minimize the potential for tonal sounds. In this regard, Vestas has warranted that the turbines will not generate tonal sounds during either full or NRO operations. The Committee understands from Evergreen II that there will be measures in place to minimize the likelihood that tonal sounds will occur and if they do occur, that they will be adequately addressed.

APPROPRIATE ACTION: **If prominent discrete tonal sounds occur or are reasonably suspected to have occurred, Evergreen II shall perform a timely investigation to determine if the wind energy facility is properly operating or has been properly maintained, and determine if any applicable sound limits have been exceeded, as determined in accordance with the Maine DEP protocols for determining compliance, including but not limited to the Maine DEP's interpretation and application of any tonal or SDRS penalties. For tonal sounds that cause an exceedance of the**

applicable sound limits, Evergreen II shall promptly notify the Maine DEP and the Town of Oakfield. Evergreen II shall then expedite an investigation of the sound level exceedance and the associated tonal sound and develop a mitigation plan, and a schedule to achieve compliance with the applicable sound level limits. Evergreen II shall provide copies of the mitigation plan to DEP and the Town, implement the mitigation plan and provide a written report describing the action(s) taken and new measurement results that demonstrate compliance. Mitigation options could include reduction of the overall sound level and/or the tonal sound component.

6. Applicable Nighttime Noise Standard

The Committee recommends that the proposed wind energy facility adhere to the more restrictive 45 dBA nighttime standard, even if the pre-development ambient (or background) sound levels are shown to be greater than 35 dBA.

APPROPRIATE ACTION: **Evergreen II shall specifically state in its applications to the Maine DEP that its proposed development will comply with the 45 dBA quiet limit during nighttime hours, even if the pre-development ambient sound level is shown to be greater than 35 dBA.**

7. Applicable Daytime Noise Standard

The Committee recommends that the proposed wind energy facility adhere to the more restrictive 55 dBA daytime standard, even if the pre-development ambient (or background) sound levels are shown to be greater than 45 dBA.

APPROPRIATE ACTION: **Evergreen II shall specifically state in its applications to the Maine DEP that its proposed development will comply with the 55 dBA quiet limit during daytime hours, even if the pre-development ambient sound level is shown to be greater than 45 dBA.**

II. Wildlife & Natural Resources

A. Wildlife

The nature and size of Evergreen II's Revised Project presents a potential for adverse impacts to wildlife. Evergreen II's application to the Maine DEP includes an assessment of the potential impact to a variety of wildlife species associated with the construction of the proposed facilities, including consultation with the Maine Department of Inland Fisheries and Wildlife with respect to the habitat of threatened or endangered species. Aside from limited impacts to wetland habitats (discussed below) the screening process has identified little in the way of potential for permanent impact. During the ensuing operational phase of the project the primary area of potential impact relates to the potential for bird and bat mortality from encountering the turbine blades (avian strikes).

1. Bird and Bat Considerations

The application materials submitted to the Maine DEP include reports that discuss monitoring for bird and bat populations and flight patterns within the project area, as well as anticipated mortality estimations when the proposed wind energy facility is operating. Based on visual and radar-based observations, coupled with observed mortality levels at other facilities, Evergreen II's consultants have projected bird and bat strikes to be at levels typically determined to be reasonable for this type of project.

2. Post-Construction Monitoring

Evergreen II's application to the Maine DEP states post-construction monitoring of bird and bat strikes will be conducted for a period of 3 of the first 5 years after the wind farm commences operation.

APPROPRIATE ACTION: **The Committee recommends that the Selectmen ensure Evergreen II complies with the Maine DEP's post-construction monitoring conditions for monitoring bird and bat strikes.**

B. Natural Resources

Given the presently undeveloped nature of the project area, there is the potential for adverse impacts to a variety of natural resources. Evergreen II's application to the Maine DEP includes an inventory of the natural resources that exist within the project area. Types of natural resources include wetlands (based on state and federal

jurisdictional guidelines) and the potential existence of rare or threatened species of vegetation. The application included the results of queries to the Natural Areas Program located within the Maine Department of Conservation. Evergreen II's project is not expected to impact rare or endangered plant species, and the project layout has been developed to minimize impacts to jurisdictional wetlands and waterbodies. While two plant species of Special Concern were found within the overall project area, the project is expected to have little direct impact to their populations.

1. Wetlands

While the layout for the proposed windfarm appears to have been developed in a way that minimizes impacts to jurisdictional wetlands, it appears that the construction of roadways to access the facilities will need to include several wetland and stream crossings. Where possible, Evergreen II has sited the proposed crossings to coincide with existing woods roads and included other measures to minimize impacts to the associated wetland and aquatic habitats.

2. Buffers

Based upon its review, the Committee has concluded the proposed facilities and activities of the project will include appropriate buffers to protect natural resources.

III. Stormwater Management

Projects of this nature and magnitude possess the potential for several types of stormwater-related impacts. They include: sediment transport during (and immediately following) construction, increases in long-term erosion potential due to concentrating flows along new roadways and increases in peak rates of runoff onto adjacent properties.

Mitigation: The application for state approval of the project includes an evaluation of stormwater runoff quantities and patterns, as well as proposed measures to address soil erosion and sediment transport. In general, Evergreen II's proposal relies on discharge of concentrated flows via plunge pools and level spreaders to re-convert runoff to sheet flows, as well as maintenance of vegetated buffers for compliance with the Maine DEP's Chapter 500 stormwater rules. The proposal for erosion control is outlined based on the Basic Standards as set forth by the Maine DEP. The Committee has concluded that these standards, if properly implemented, will be adequate.

Construction Monitoring: It is the Committee's understanding that the Maine DEP will require the provision of a "third-party inspector during construction to ensure that stormwater and erosion control measures are constructed and maintained in accordance with the approved design materials."

APPROPRIATE ACTION: **The Selectmen shall request in writing that the Maine DEP use a third party inspector (to be selected by the Maine DEP in consultation with the Town) to review and ensure the stormwater and erosion control measures are constructed and maintained in accordance with the approved design materials.**

IV. Blasting

Blasting is the practice of breaking up ledge or rock material through the use of explosives. Evergreen II anticipates that blasting will be required as part of the site preparation to accommodate the proposed 50 wind turbines in their planned locations (40 proposed within Oakfield). In addition, Evergreen II anticipates that blasting may be required for road construction and the placement of underground power lines.

Blasting is an important consideration because it may cause (1) vibrations that affect the structural integrity of buildings or wells; (2) sound and noise that is annoying; (3) flying debris that may cause serious bodily injury; and (4) the destruction of unique natural areas..

Mitigation: Evergreen II's application materials submitted to the Maine DEP indicate that all blasting will be done in conformance with guidelines published by the U.S Department of the Interior and that a pre-blast survey will be completed for any structures within 2000 feet of any blasting operations. Under the Maine DEP regulations, only landowners within 1000 feet must be given notice of any blasting under the Maine DEP regulations – even though pre-blast surveys must be completed for structures within 2000 feet. Moreover, since there are few or no structures within 1000 feet of any anticipated blasting areas, it is unlikely that any notices will be required under the Maine DEP regulations.

During the Oakfield I review process, Evergreen II agreed to include bedrock wells in all pre-blast surveys as well as provide written notices to the Town and all affected landowners within 2000 feet of any blasting area, which represent additional measures than what the current regulations require. Evergreen II, in its pending amendment application, has represented that it will continue to honor this agreement as to blasting.

APPROPRIATE ACTION: **The Selectmen shall request that the Maine DEP accept and require Evergreen II's amendment application that represents all pre-blast surveys will**

include consideration of bedrock wells and that Evergreen II, or its duly authorized representatives, will provide written notices to the Town and all affected landowners within 2000 feet of any blasting area at least three (3) days prior to commencing any blasting operations.

V. Shadow Flicker

Shadow flicker occurs when the angle of the sun aligns with rotating turbine blades causing a shadow to be cast. It can be described as the flickering effect of shadows cast by blades of a turbine blade passing between the sun and a given location called receptor (the effect is similar to a strobe light). Shadow flicker depends upon 6 main conditions:

(1) The amount of sunlight;
(2) The wind direction (which affects the rotor orientation);
(3) The time of day;
(4) The geographical position of a wind turbine;
(5) The topographical position of a wind turbine; and
(6) The distance to habituated areas or other significant areas in the vicinity of a wind turbine.

The effect of shadow flicker is most pronounced when the blades of the turbine are perpendicular to the line between the sun and the receptor. Obstacles, such as trees, terrain, or structures between a wind turbine and a receptor location, however, will reduce or eliminate shadow flicker effects. Further, shadow flicker intensity decreases as the distance from a receptor location to a wind turbine increases (i.e., as one moves further away from a wind turbine, shadow flicker will become less intense). In this regard, shadow flicker is more pronounced within 1000 feet of a turbine during sunrise and sunset, since the angle of the sun is lower and will cast longer shadows.

While there is little or no documented potential for health impacts associated with shadow flicker, it can constitute an annoyance for those who are subjected to it and, accordingly, the Maine DEP has set a limit of 30 hours per year as a reasonable upper limit for shadow flicker on residential properties.

Evergreen II used a modeling approach to predict shadow flicker under "worst case" conditions. This worst case analysis assumed that (i) the sun always shines from sunrise to sunset; (ii) the rotor plane is always perpendicular to the line from the wind turbine to the sun; (iii) the wind turbine is always turning; and (iv) there are no topographic or vegetative buffers between a wind turbine and a receptor location.

Evergreen II's application to the Maine DEP includes the results of its computer modeling, which suggests, under worst case conditions, that approximately 63 residences will be subject to shadow flicker impacts. *(See Evergreen II's Shadow Flicker Study/Report in Section 26 of the Application, which is attached as Appendix K.)*

Of these 63 residences, approximately 5 will be subject to language in leases/easements in which Evergreen II is released from liability for impacts associated with Shadow Flicker.

For the remaining 58 non-participating residences, the anticipated annual duration of these impacts will be less than 30 hours in all cases, and the majority of residential locations are expected to experience less than 15 hours of shadow flicker per year. The Committee notes that, consistent with published guidelines for the estimation of shadow flicker, these projections are based on assumptions relative to a variety of meteorological conditions (cloud cover, wind direction, wind speed, etc.), which have a bearing on the potential for shadow flicker, and are based on recorded meteorological conditions for the project area.

Based on this information, for the remaining 58 non-participating residences, the anticipated annual duration of these impacts will be less than 30 hours in all cases, and the majority of residential locations are expected to experience less than 15 hours of shadow flicker per year.

VI. Public Safety & Public Access

A. Setbacks & Safety

Setbacks represent a specific distance (or a range of distances) from one object or activity to another (e.g., a new building may need to be setback at least 100 feet from a body of water such as a lake).

In this instance setbacks are important because they are designed to promote safety by preventing unnecessary injuries or property damage. Although catastrophic failure of wind turbines is not a common event, units have been known to fail structurally sending turbine components a significant distance and presenting a potential for property damage and serious bodily injury. Lightning strikes, severe storms, damage to the concrete foundations, metal fatigue, brake overloading, faulty welding, and normal wear and tear may all lead to the structural failure of a wind turbine. Other elements of risk that can be addressed through setbacks include Ice Throw, which is discussed in more detail below.

Both the manufacturer of the proposed wind turbines and the Maine DEP appear to concur that, in the absence of site specific safety assessments, a safety-related setback of 1.5 times the maximum height of the wind turbine is appropriate (in this case 688.5

feet). This setback is further endorsed by agencies engaged in the certification of windpower installations (Germanischer Lloyd and the Deutsches Windenergie-Institute). This setback should be maintained between the turbines and occupied structures, roads, trails or other public use areas. The facility layout has been developed with this criterion in mind and the only identified area of concern, other than ITS 83 which is addressed later in this report, relates to the apparent proximity between the proposed turbines and the former Sam Drew Road, which is used for winter recreation and is discussed below.

B. Ice Throw

Ice throw consists of the shedding of accumulated ice from the blades of the turbine. The potential for ice throw is associated with freezing conditions and precipitation (generally in a liquid state). While studies of ice throw potential have been conducted in a number of locations, it is important to note that projections regarding the maximum size and distance for ice throw for a specific installation should be based on observations regarding the same equipment.

The combination of the height of the turbine with each turbine's location (usually at higher elevations with adjacent slopes) can cause ice to be thrown for a significant distance. This is a concern because ice throw can cause serious bodily injury to persons and animals that are in close proximity to wind turbines, as well as property damage.

While turbine manufacturers have researched coatings and other means to reduce the tendency for ice accumulation on turbine blades, the primary mechanisms for avoiding and mitigating the risks associated with ice throw include establishing appropriate setbacks to areas of public access, use of signage to warn the public of risks, and implementing appropriate operational protocols to identify and respond to specific conditions, including the potential accumulation of ice on turbine blades.

Setbacks: Research of available materials suggests that the designated safety buffer of 1.5 times the maximum height of the wind turbine (in this case 688.5 feet) is adequate to reasonably protect persons and property from Ice Throw. In general, the layout of the proposed windfarm, including buffer distances that will be under legal control of Evergreen II or First Wind (via lease, easement, or acquisition) meet or exceed the recommended minimum setback distance of 688.5 feet. The exception to this relates to the area where the Sam Drew Road (a town way) and the local snowmobile and ATV route (ITS 83) pass within this envelope.

Post-Construction Monitoring: While no formal program of post-construction monitoring of Ice Throw is recommended for this project, it is appropriate to maintain records of the locations of observed frozen debris that has been shed by the turbines, particularly in the event such debris appears near or beyond the recommended setback.

APPROPRIATE ACTION: **Evergreen II or its successors shall cooperate with the Town in maintaining records of Ice Throw debris found within public ways or other areas in excess of the designated buffer distance (688.5 feet) from the base of turbines.**

C. Public Access

Currently, the International Trail System ["ITS"] and a portion of the former Sam Drew Road are sited in areas where wind turbines are proposed to be located (including the ridgeline of Sam Drew Mountain). Because ice throw is a safety concern during the winter months, appropriate measures must be implemented to address snowmobiling and other types of winter recreational activities (such as hiking, cross-country skiing, snowshoeing, hunting, etc.).

Evergreen II has indicated that it is working with the local snowmobile club and individual landowners to facilitate re-routing the ITS in this area and a portion of the former Sam Drew Road to maintain the stipulated setback distance. Several alternative routes have been preliminary identified, and are depicted under *Appendix L* to this report.

The Committee appreciates the efforts of Evergreen II, the snowmobile club, and individual landowners to focus on a re-routing of those segments of the ITS 83 and the former Sam Drew Road that are within 688.5 feet of any turbine prior to turbine operation. Such measures will help maintain and promote public access and recreation within the Town of Oakfield, which are activities that provide significant economic benefit to the Town and surrounding communities.

The Committee urges prompt agreement on a final, safe re-routing of such specific segments of the ITS and the former Sam Drew Road before operation of Evergreen II's Revised Project. Accordingly, the Committee recommends that Evergreen II undertake best efforts to finalize relocation of public access trails outside the setback area prior to commencement of operations and, for any trails that cannot be relocated beyond the setback areas after best efforts, Evergreen II shall implement specific and previously established measures to minimize risks to the users of the trails within the setback areas. Such previously established measures are: Installation and maintenance of appropriate signage warning of potential risks; maintenance of the on-site SCADA system (discussed in Section VIII) to monitor and track abnormal conditions; and, implementation of appropriate actions in response to abnormal operating conditions, including but not limited to shut-down of individual turbines due to accumulation of ice on turbine blades.

APPROPRIATE ACTION: **Evergreen II shall continue to work with the local snowmobile club and individual landowners to facilitate relocating snowmobile trails outside the setback areas and shall take appropriate steps to minimize risks associated with the use of trails within the setback areas, including providing signage and implementing operational constraints.**

VII. Impacts to Town Ways

The transport of turbine components and equipment necessary for their erection will dictate uncharacteristic usage of several Town-owned ways, which may result in damage or impacts to Town roads and adjacent properties.

Mitigation: In anticipation of any such impacts, Evergreen II/First Wind and the Town have engaged in discussions relative to the anticipated need for temporary improvements to support access, as well as the potential for damage to the roadways (including the Thompson Settlement Road, Nelson Road, South Oakfield Road, Brown Road, and Spaulding Lake Road) and the responsibility for repairs. A separate document entitled "Road Authorization Agreement" is currently being updated to conform to the amended project scope. The subject agreement is expected to include provisions with respect to documentation of the current (pre-construction) conditions of the roadways to ensure that any impacts can be objectively identified.

APPROPRIATE ACTION: **Evergreen II shall not commence any construction until Evergreen II and the Town of Oakfield have reached concurrence on a revised "Road Authorization Agreement" which articulates responsibilities associated with improvement to Town ways and use of said ways by oversized vehicles/loads.**

VIII. Wind Energy Facility Operation and Maintenance

Monitoring and maintenance activities will be required to ensure the continued operational and structural integrity of a wind turbine, and will have a bearing on the

potential for the facilities to constitute a risk or nuisance to the inhabitants of the community.

An on-site SCADA (supervisory control and data acquisition) system will be connected to each turbine generator's control system and link to both Evergreen II's operational centers and Vestas' customer support center. The system will track specific operating parameters for monitoring. The SCADA system uses automated algorithms to detect abnormal conditions and if one should occur, Evergreen II and Vestas staff will be automatically notified, provided with information regarding the event, and can troubleshoot, stop or reset turbines from their remote locations.

More specifically, each turbine will be equipped with vibration sensors designed to identify issues with wear of gears, bushings and bearings, as well as accumulation of ice or blade damage. Each turbine will be equipped with thermal sensors to identify unusual temperature rise in the windings of the generator and in the various lubricants (in the gearbox, for example). In addition to alarms when vibration or temperature reach pre-determined setpoints, a variety of parameters will be tracked on system computers (by Evergreen II and Vestas) which can identify trends before an issue results in damage to the turbine.

IX. Decommissioning

Decommissioning is the process of disassembling a wind turbine or wind turbines and restoring the site to a similar pre-development condition. The Governor's Advisory Committee on Windpower has recently acknowledged the limited lifespan of these projects, as well as the negative impacts associated with allowing them to remain in place after their useful lifetime has lapsed. To address this concern, permitting under Maine's Site Location of Development Law requires developers of grid-scale windfarms to set aside funding to support removal of the facilities and restoration of the site. If a specific wind turbine does not operate for 12 months, it must be decommissioned.

The primary concern with decommissioning is financial – will the Developer of a proposed wind farm project have sufficient funds to properly decommission a wind turbine project? If funds are not available, then wind turbines that are no longer operating may remain in place for a significant time period.

The funding concern relates to the solidity of the assumptions used in the computation of the reserve fund, given fairly significant fluctuations in both construction costs (associated with removal/restoration) and in the commodity values of copper and other components that will likely have a meaningful impact on the ultimate salvage value of the units - all key elements in the overall financial analysis.

Funding Projections: The application materials submitted by Evergreen II include computations relative to the projected net costs associated with removal and restoration of the Oakfield wind project. The designated protocol includes a $50,000 annual contribution to the fund and allows for the basis for the reserve funding to be revisited in year 15 and for adjustments to be made in the annual amount set aside at that time.

APPROPRIATE ACTION: **At such time as the Maine DEP provides for the computation of decommissioning costs to be revisited, documentation shall be submitted to substantiate both demolition costs and salvage values included within the analysis.**

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COMMITTEE UPDATE

In the event that Evergreen II's Revised Project receives approval from the Maine DEP and is subsequently constructed, there may be issues that require review by the Committee. For this reason, the Committee recommends that the Selectmen retain the Committee for at least two years after operations at the proposed wind energy facility commence. The Committee should be charged with maintaining a record of all issues related to construction and operation of the proposed wind energy facility, including any sound complaints or other issues should they occur. Further, the Committee should be charged with developing a report, or an addendum to this report, to update the Selectmen on the operations of the proposed wind energy facility.

APPROPRIATE ACTION: **The Committee shall remain in place for at least two years after commencement of operations of the proposed wind energy facility and, prior to sunsetting, the Committee shall issue a report to the Selectmen as an update.**

Dated at Oakfield, Maine, this 19th day of October, 2011.

TOWN OF OAKFIELD WIND ENERGY REVIEW COMMITTEE

By: James Sholler
Jim Sholler

By: Robin Crandall
Robin Crandall

By: _____
Linnwood Hersey

By: Anthony White
Anthony White

By: Ruby D. Hardy Sr

Kirby Hardy

By:_____
Kathy Briggs (1st Alternate)

By:_____
Gina Clark (Alternate)

APPENDIX

A. *Project Area Map of the Proposed 2011 Oakfield Wind Project, as Revised*

B. *Project Area Map of the Proposed Transmission Corridor from Oakfield to Chester*

C. *Evergreen II's Sound and Noise Study*

D. *Maine DEP Regulations Chapter 375, Section 10 "Noise"*

E. *Noise Levels for Homes that Exceed 45 dBA, 50 dBA, and 55 dBA*

F. *Low Frequency Noise Levels for Non-Participating and Participating Landowners*

G. *Oakfield Wind Project Sound Complaint and Resolution Protocol (2009)*

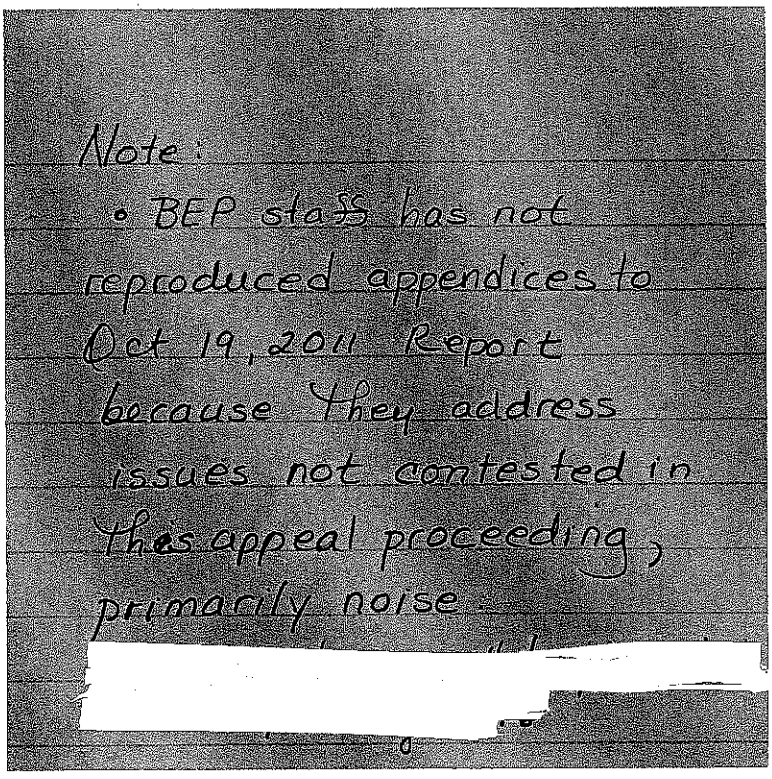
H. *Oakfield Wind Project Sound Complaint and Resolution Protocol (2011)*

I. *Proposed Oakfield Wind Energy Facility Operations Ordinance*

J. *Proposed Noise Rule Changes by the Maine Board of Environmental Protection*

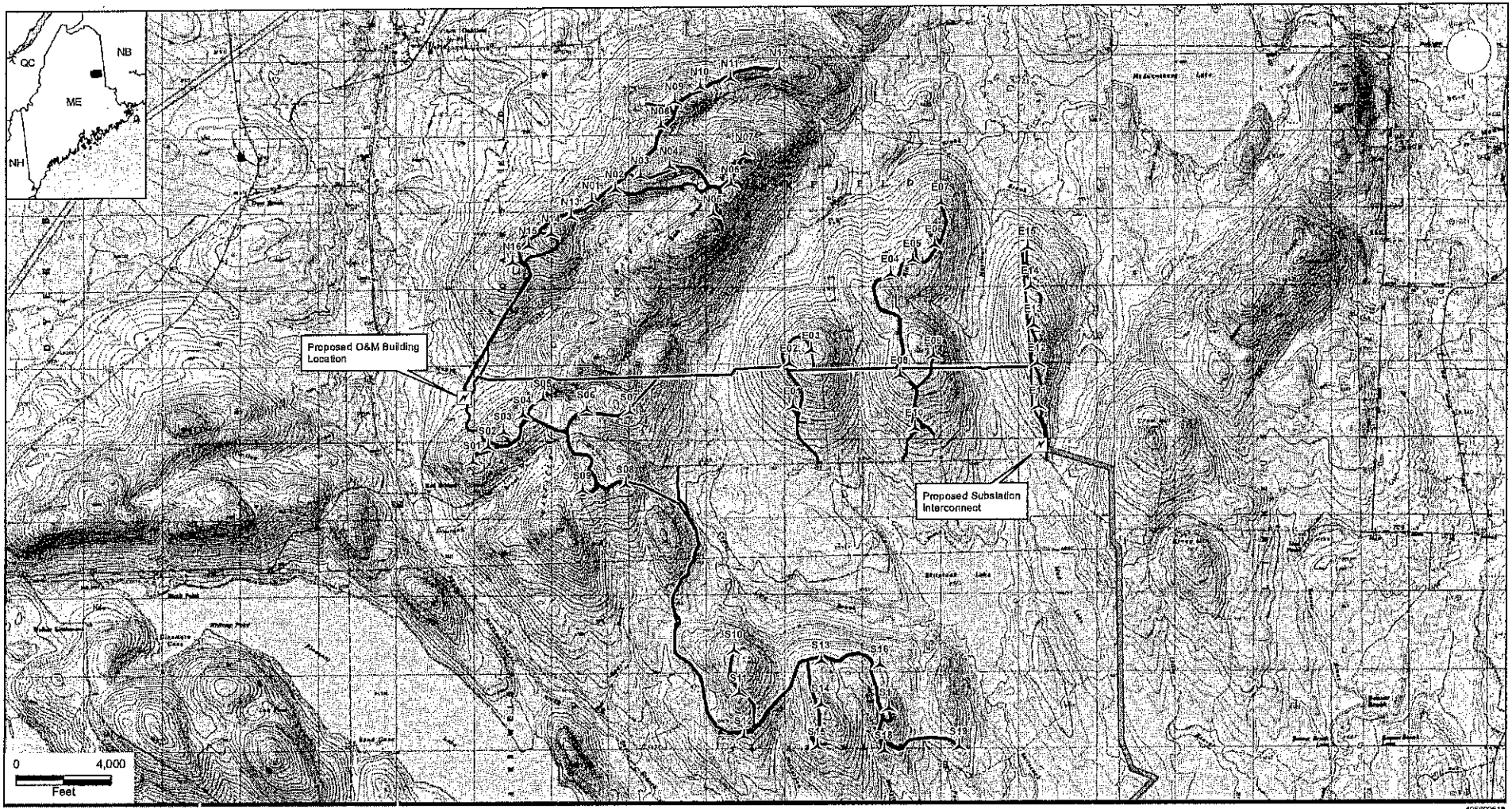
K. *Evergreen II's Shadow Flicker Study*

L. *Alternative ITS Snowmobile Trail Routes*



Appendix A

Project Area Map of the Proposed 2011 Oakfield Wind Project, as Revised



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Legend

- Proposed Turbine (Vestas 50)
- Proposed 115kv Transmission Corridor
- Proposed Collector Corridor
- Proposed Access Roads

195600519

Client/Project
Evergreen Wind Power II, LLC
Oakfield Wind Project Amendment
Oakfield, Maine

Figure No.
1

Title
Summit Project Development Area
May 2011